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CARDIAC DISEASE COMPLICATED BY PREGNANCY

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Cardiac disease as far as it is related to pregnancy may be placed in three groups: (1) Those cases in which there is a mild degree of cardiac involvement, and which is only discovered in the routine physical examination. (2) Cases of moderately advanced cardiac disease, in which, however, there has never been any break in compensation. (3) Cases of advanced cardiac disease, in which there has been a break in compensation, or in which a break is impending. In this classification no mention has been made of any definite type of lesion, and this has been purposely avoided, as the concensus of opinion at the present time appears to be that the type of lesion makes absolutely no difference; and it is the condition of the myocardium, or "reserve power," which is the important thing in cardiac cases, in their relation to pregnancy.

It is of interest to note, however, that in 268 cases collected by Fullner, Porak, Vinay, Pardee and DeLee the various forms of heart disease are:—mitral regurgitation 74; mitral stenosis 50; double mitral 76; aortic regurgitation 20; aortic stenosis 2; combined mitral and aortic 41; and 5 cases diagnosed as myocarditis without any lesion being specified.

Beck claims, and is supported by DeLee, that the cases of mitral stenosis are the most treacherous, because practically always there is some associated myocarditis. Cardiac disease as regarded in this paper, will not be considered as heart disease in itself, but rather only as it will be affected by pregnancy and labor. The obstetrician, nevertheless, will be called upon to view the situation from many different angles.

First of all let us consider unmarried girls, who have been told they have heart

disease and come for advice as to whether or not they should get married. Of course a girl with serious heart disease will be better off if she remains single, and does not attempt to have children. The difficulty is, however, that she has set her mind on getting married, she will go to enough doctors until she finally finds one who will give her the kind of advice she is looking for, and tells her that it will be all right.

She then becomes married, and another problem presents itself. Still feeling that she should not become pregnant, the doctor advises various methods of contraception, which probably will work very well for a time, but sooner or later, because of carelessness, or because of the fact that all methods of contraception are by no means certain, she now becomes pregnant.

If at this time she comes for advice—then what is to be done? If, upon examination, the physician feels that the cardiac condition is too serious, it is probably better to advise that the pregnancy be terminated. If so, by what method shall it be done? One course open is simply to do the traditional dilatation and curettage, which relieves us from our immediate difficulties. Before long, however, we will probably be up against the same situation again. It is probably better, therefore, that the uterus be emptied, and then under morphine and scopolamine, and with light nitrous oxide anaesthesia, the abdomen be opened and some simple method of sterilization be performed from above. This, of course, does not entirely get one out of his difficulties for the cardiac disease still remains with the patient. She is, however, practically certain that she will not become pregnant again, and at least one of the difficulties has been eliminated.

One other course is open to the obstetrician. If the woman is particularly desirous of having a baby, he may explain to her the dangers of going through with the pregnancy, and then tell her that if she wants her baby badly enough, and is willing to make a great amount of personal sacrifice, that he will endeavor to follow her through her pregnancy with the stipulation that if at any time he considers the situation dangerous, he shall at that time empty the uterus.

AN ILLUSTRATIVE CASE

One such case has recently come to my attention which illustrates the point so well, that perhaps it may be permissible to describe it in this connection. A young

woman, 26 years of age, presented herself at the doctor's office declaring herself to be pregnant. On examination she was found to be three to four months pregnant, and also on further examination it was found that she had a double mitral disease, —(mitral insufficiency, with a relative stenosis.) The doctor who examined her told me it was his impression that this heart was just on the verge of decompensation. He advised a prophylactic abortion, but the woman so strongly insisted that she be allowed to have her baby he finally consented to watch her through her pregnancy, provided she was willing to make enough personal sacrifice, and to implicitly follow his directions. This she consented to do.

First of all he insisted that she move from her home on Long Island, and take an apartment in the city, near his office. She was then instructed in the proper hygiene of pregnancy, and above all to avoid any possible exertion. A considerable portion of her time was spent in bed. She was also referred to an internist, who followed her condition from week to week. Much to the surprise of her doctor her heart actually improved under this rigid regime, and she was carried along until about two weeks before the time of her expected confinement. At this time she was sent to the hospital, placed in bed and given small doses of digitalis. About one week before her expected confinement, a Caesarian section, classical type, was performed, and a living male infant delivered. Shortly after her confinement, she suffered from the over effect of digitalis, although the dosage had been small, and according to the usual methods of reckoning, there was no possibility of over-dosage. She developed a condition of partial heart block, with numerous extra-systoles, but finally because of her splendid co-operation, she rallied and made a wonderful recovery. It is interesting to note that this same woman absolutely refused to be sterilized, and the doctor had to be content with doing the abdominal operation, without sterilizing her as he had originally planned to do. To show, however, that this method of procedure is not without danger, another case of somewhat similar circumstances will also be cited.

In this case a young Italian girl, 19 years of age, presented herself at the Out Patient Clinic of the Long Island College Hospital when six months pregnant. On physical examination it was discovered that she had a slight malar flush and her neck veins

were somewhat prominent. The heart, especially the right heart, was slightly enlarged, with a heaving impulse at the apex. A low pre-systolic and a louder systolic murmur could be heard. A diagnosis of mitral insufficiency and stenosis was made. Upon questioning it was found that she had been attending the Cardiac Clinic for the past three years, and had been in trouble more or less during her entire life. Her condition was explained to her, and a plan outlined similar to the one described in the preceding case. This girl, however, was a poor girl, who had a sick husband at home, and who was expected to do the family housework. After following her for a month it was noticed that she was becoming more dyspnoeic, and that her ankles were beginning to swell; in short beginning signs of decompensation were appearing.

At this time she was sent to the hospital, where she remained for a month and a half, most of the time in bed, with absolutely nothing to do which required any exertion whatever. She was now about two weeks before term, and a Caesarian section had been planned for a certain Thursday morning, about ten days before the expected date of confinement. On Tuesday evening, however, following an emotional upset, due to some disturbance with her sister, who had visited her during the afternoon, she set up an acute decompensation, unfortunately fell into labor, which could not be stopped with large doses of morphia, and died the following day, a typical cardiac death. The strain was too much for her.

Everything mentioned thus far has been more or less of a general nature regarding the general management of cardiac cases complicated by pregnancy. Let us now consider them more specifically, and in order in which they were originally grouped at the beginning of this paper.

SPECIFIC FEATURES IN MANAGEMENT

1. Mild degrees of cardiac disease discovered in the routine physical examination. These cases should be carefully followed during pregnancy for evidences of decompensation; and at the onset of their labor should be given some form of analgesia. In this type of case the typical "Twilight Sleep" is of the greatest value. When the second stage is reached and the head hits the perineum, an episiotomy should be done and forceps applied, in order to reduce as much as possible the amount of voluntary effort.

2. Cases of moderately advanced cardiac disease, in which there have never been any break in compensation.

Most of the authorities on this subject feel that we usually "have one break in compensation ahead of us." That is to say the patient may be carried along, and should a break in compensation occur, she may usually be carried past this one break. It is also more or less generally accepted that one should not wait for a second "break".

The treatment in this type of case therefore will depend largely upon the estimation of the obstetrician as to the severity and length of the labor. In multiparous patients, in whom one has reason to believe the labor will be short and easy, a plan similar to the one outlined in the preceding group, eg. (morphine and scopolamine), may be followed. In primipara, however, the situation is different, for we can reasonably expect a rather long, and perhaps difficult labor. In these cases it is perhaps better to do a Caesarian section before the onset of labor, or at the very latest, as soon as labor has begun. A case to illustrate this point is as follows:—A young woman, age 24, was admitted to hospital with known double mitral disease, but as yet had never had any decompensation. A Caesarian section had been planned, but at onset of labor the head was already so firmly engaged, and so low down in the pelvis, and the labor progressed so rapidly and easily that she was allowed to deliver from below. The entire labor lasted only six hours and twenty minutes, under typical "Twilight Sleep," so that there was apparently very little strain on the patient.

Convalescence was prompt and uneventful, and it would seem that this was a very happy termination to a case that had been causing considerable worry. That it would have been better for her to have had a Caesarian section, however, is shown by the fact that in less than two months following delivery she began to complain of the following symptoms:

Distress in epigastrium, palpitation, swollen ankles and legs, spots before her eyes, enlargement of abdomen, and marked dyspnoea and orthopnea. She returned to the hospital and examination showed:—The patient had to sit up in bed in order to breathe; there was a considerable degree of secondary anemia, the heart enlarged, a marked shock, and thrill felt over precordium, pulse irregular with numerous extra systoles and a loud, blowing systolic

murmur, also a short pre-systolic murmur could be heard at the apex. The pulmonic second sound markedly accentuated. The abdomen was markedly distended, and filled with fluid, with the liver extending down to below the umbilicus. There was a marked oedema of lower extremities extending up as far as the knees, also considerable oedema of eyelids. A diagnosis of double mitral disease with decompensation was made. Apparently, although the strain of her labor had been very slight, it had been more than this particular patient, with her amount of reserve power, could stand.

Another point which should be mentioned in connection with this group, which are allowed to deliver from below, is as follows:—Frequently, immediately after the birth of the child, when the uterus contracts down, there is an outflow of blood which has occupied the large uterine sinuses back into the general circulation, with the result that the heart which has already been taxed practically to its limit, is not able to handle the extra load. Preparations should have been made so that an immediate phlebotomy can now be done, and stimulants should also be in readiness. The further treatment of these cases which undergo decompensation will be described in connection with the next group of cases, which will now be considered.

ADVANCED CARDIAC DISEASE

3. Cases of advanced cardiac disease in which there have been a break, or in which a break is impending.

As has been mentioned in discussing the previous group, it is usually not safe to wait for a second break in compensation. Let us then consider a case under observation, in which a break has just occurred. What shall be done when we see a woman coughing, blue at the lips and finger tips, swollen ankles, perhaps ascites, and rales in the dependent portions of chest? By most obstetricians it is now accepted the usual medical treatment of digitalization, rest and restricted fluids is not sufficient, and moreover if this method of treatment alone is employed the patient will soon be dead.

The routine followed in the Obstetrical Department of the Long Island College Hospital is as follows:—

1. Large doses of morphia, enough to keep the patient absolutely quiet. To be more specific let us say that morphine sulphate gr. $\frac{1}{4}$ is given hypodermically at once, and then depending on whether or

not the patient is restless, the drug is repeated in 1/6 gr. doses at regular intervals.

2. An immediate phlebotomy. Relief must be obtained at once for the overburdened heart, and this procedure should not be postponed until the lungs are filled with fluid, for then when we attempt to lessen the burden upon the right heart, we are practically up against a hopeless proposition.

The amount of blood to be taken off depends on the condition of the patient, and most especially upon the effect the withdrawal of blood has upon the pulse. If patient's pulse suddenly starts to increase in rate, becomes more feeble, and irregular, the phlebotomy must be stopped.

It is unnecessary to pay any attention to the blood pressure, for in many instances, even though the phlebotomy has been large, there is but little change in the blood pressure. The usual amount of blood which is taken off varies from 300 to 500 cubic centimeters.

3. If there is any tendency to pulmonary oedema, the patient is placed on her side with her head as low as possible, which seems to favor drainage. Counter irritation—e.g., flax seed poultice, or cupping, is then applied to the chest. Atropine may also be given to help dry up the secretion.

4. The usual medical treatment is also given, viz:—

Digitalis, usually in large doses, until patient is digitalized, and then 25M per day. Stimulation in form of caffein is also given in an effort to bridge the patient over her temporary embarrassment. Fluids are restricted.

It cannot be too strongly impressed, however, that the important factors in this method of treatment are: early phlebotomy, and enough morphia to keep the patient absolutely quiet.

A typical case is as follows:—

The patient, a girl of 26, admitted to hospital for observation and found to have loud, blowing, systolic murmur at the apex, transmitted to axilla, and an accentuated pulmonic second sound. She was practically at term, but not in labor. Caesarian section (elective) was performed under morphine and scopolamine with gas anaesthesia. Two days following the operation there was a break in compensation, apparently initiated by a rather moderate amount of abdominal distention, which pushed the heart upward and outward. The patient was coughing, spitting up

blood, somewhat cyanotic, and pulse 136, and very weak and irregular.

A phlebotomy of 450 c.c. was done immediately, the patient was already on regular doses of morphia, so that an extra one-sixth of a grain was sufficient to make her perfectly quiet. She was placed in the Trendelenberg posture at once, and atropine sulphate gr. 1/100 were sufficient to relieve the pulmonary congestion. The patient had already been digitalized, and temporary stimulation was furnished with camphor in oil and caffein. On the next day patient's pulse was down to 110, much more regular and subjective symptoms rapidly clearing up. The day following her pulse was 80, and from this point patient made an uneventful recovery and convalescence.

SUMMARY

1. Heart Disease complicated by pregnancy is a serious condition.
2. The heart does not behave as it does in ordinary cases of chronic heart disease.
3. Therefore the ordinary treatment is not sufficient.
4. An obstetrician is as necessary for their proper management, as is the cardiologist.

RECENT ADVANCES IN THE THERAPY OF TUBERCULOSIS*

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Briefly I will summarize and attempt to evaluate the important therapeutic agents in tuberculosis. Comparing the chances of lasting improvement or of recovery which a tuberculosis patient had twenty-five years ago with the prospect of healing which he has nowadays, there is but one conclusion: they have advanced and improved remarkably.

The five methods of treatment at the beginning of the century were:

1. The classical air and rest cure.
2. Immunology, embodied in tuberculin treatment.
3. Chemotherapy.
4. Collapse therapy and,
5. Heliotherapy, which is not recent, but was used long before the day of Hippocrates.

Comparing the fate of these five methods during the last twenty-five years, we find that the rest and fresh air cure has

stood the test of time, and it shall remain as the foundation of whatever treatment one might undertake against tuberculosis. But it must be admitted that the proportion of cases which can be restored to health by sanatorium treatment alone is, after all, small.

The immunological or tuberculin treatment has been given a fair trial. It has failed. Tuberculin does have some effect on tuberculous lesions.

The hypæamic and inflammatory changes which a hypodermic injection determines at the site of a specific lesion is followed by a tendency to form scarlike fibrous tissue. Microscopic observation of such reactions in the lung are impossible and there is always the danger of extension and ulceration of the lesion.

Sohli's method of employing minimal doses at the beginning of treatment and gradually increasing, avoiding carefully any kind of general or focal reaction, has also failed to give us a dependable method of treatment. The same may be said of the countless modified preparations of tuberculin, bacillary emulsions and extracts, or more or less defatted abstracts, or the partial antigens.

VACCINATION OF THE NEWBORN

It may be well here to mention the B. C. G. process, vaccination of the newborn infant against tuberculosis with the Bilitated bacillus of Calmette-Guerin. Calmette in conjunction with Guerin cultivated the tubercle bacilli in pure ox bile mixed with glycerin in proportion of 5 to 100. This culture medium, extremely alkaline, swells and saponifies the waxy and adipose shell that covers every tubercle bacillus without influencing unfavorably the vitality of the tubercle bacilli. After having grown on the bile glycerin media for a period of thirteen years, 230 cultures, a race of bacilli was obtained that lost all their former property of producing tuberculous lesions, but this new race of bacilli retained the power of producing tuberculin and of calling forth the formation in the organism of tuberculous antibodies.

This is precisely the bacillus that is utilized under the name of B. C. G. for creating immunity in newborn infants. Dosage and method of administration: In the form of a light emulsion, that contains in a dose one centigramme of bacilli; that is, about four hundred millions of tubercle bacilli, the infant absorbs through the mouth half an hour before he is nursed, three such doses in succession with an

* Read before the Calhoun County Medical Society February 7th, 1928.

interval of 48 hours between them, on the third, fifth and seventh days after birth. Every dose is given in a small spoon, mixed with a little milk. The emulsion must be more than ten days old, as it is essential that the bacilli it contains should remain alive.

CHEMOTHERAPY

The most noteworthy chemotherapeutic agent used in the treatment of tuberculosis during the past year is Auro-thio-sulphate of sodium, or sanocrysin. It is an inorganic double salt of gold given intravenously beginning with a 1/10 to 1 grammie dose, much in the same manner as salvarsan. It was discovered by Holgar Moellgarrdt of Denmark, and the principles recommended for its use by Moellgarrdt seemed sound in conformity with Ehrlich's postulates. However, we may say that the past three years sanocrysin has been tried honestly and under the most favorable conditions by tuberculosis experts in many countries, both experimentally and clinically. The results have led to disappointment and failure. The toxic symptoms determined by sanocrysin are very similar to those of poisoning by a metallic substance, like mercury.

ARTIFICIAL PNEUMOTHORAX, SOUND

Pneumothorax or collapse-therapy remains then as one universally developed procedure in the treatment of tuberculosis. It is based on the soundest anatomical and physiopathological principles. Its history dates back more than a century ago. The reasons for its slow development are due to two factors; first, the more recent advent of aseptic surgery, and second, the discovery of the X-ray. The progress and improvement of artificial pneumothorax have run exactly parallel with the progress and improvement of X-Ray technique. Its use is rapidly becoming more universal.

Artificial pneumothorax wins its most striking success in cases, which before its advent, would have been regarded as hopeless, where the sputum is abundant and the fever high. Such cases can be restored to health with a full capacity for work. Tuberculous women can regain the rights of motherhood. They can bear healthy children and rear them.

The advances made in X-Ray technique have greatly enlarged our diagnostic facilities and consequently the group of patients suitable for collapse-therapy. One may say, probably without exaggeration, that at some period of their history, the majority of tuberculous patients who die

have been, at least temporarily, in a condition justifying artificial pneumothorax.

FAVORABLE TO COLLAPSE-THERAPY

The conditions for success in collapse-therapy are unilateral disease and a free pleural sac. The cauterization of pleural adhesion through a thoracoscope (known as the Jacobean method) may be possible in some cases, but its use is limited. Collapse induced by extra pleural thoracoplasty has improved in technique considerably within the last few years. It has the disadvantage of unrevertible collapse, throwing the lung permanently out of function, whereas artificial pneumothorax in a large proportion of cases, allows the once diseased lung to be restored functionally. Thoracoplasty is a substitute for pneumothorax when the latter has proven impossible or inefficient.

Phrenicotomy, which is section of the phrenic nerve as a method of collapse, is limited in its use, and then only when pneumothorax has been found unfeasible. It is best applied to lesions localized to the base of the lung and when they are situated in the immediate neighborhood of the diaphragm.

The technique of artificial pneumothorax has improved in many ways: gas embolism may be controlled; exudates are not serious drawbacks; they may be tapped, even when they become thick and turbid. Oleothorax in such cases has proved of value: example as gomenal 5 to 20% in olive oil. This maintains the pneumothorax and controls the formation of adhesions.

The development of contralateral lesions is one of the most frequent obstacles to success. Often the original collapse may be maintained if the patient is put on prolonged bed rest. If the collapse of the primarily affected lung has lasted long enough, and we may presume that it has resulted in healing, we may let the pneumothorax on that side resorb and induce collapse on the other side. Or, if the danger be urgent, collapse may be induced in the contralateral lung before the first pneumothorax has entirely disappeared. Bilateral collapse may be attempted in very selected cases where the lesions are progressing rapidly and one feels there is nothing to lose.

Collapse-therapy is a mechanical treatment; though it improves the prognosis, it is not specific. Regardless of what new advances may come from the immunological or chemotherapeutic fields, collapse-

therapy will always hold at least second place.

SUNLIGHT THERAPY

Just a few words on heliotherapy which is one of the very oldest therapeutic measures. Long before Christianity we had the sun worshipped and the Greeks and the Romans had their solariums.

In the general treatment of tuberculosis exposure to cool air, promoting tone and metabolism, is as important as exposure to light. The true value of actinotherapy in the treatment of the various forms of tuberculosis is neither sufficiently recognized nor admitted. Whilst a growing body of opinion is agreed as to its usefulness in tuberculous lesions involving the skin, glands, bones and joints, there are many adverse opinions expressed as to its treatment of pulmonary tuberculosis.

Actinotherapy in regard to tuberculosis is not yet placed on a proper scientific footing. Technique and dosage differ widely in different hands, as do also the sources of radiation which are employed. Some general factors may be stated upon which all of us agree. First, actinotherapy acts on the human tissues as a general stimulant, and the stimulus must be adjusted to the patients' powers of resistance. If dosage is correct, it is usual to find a gradual improvement resulting in the patient's condition, and that wherever the seat of the tuberculous disease may be, calcium metabolism is stimulated, appetite and digestion are improved, and the body weight increased.

Actinotherapy acts

- (1) by stimulation of the central nervous system via the nerve endings in the skin
- (2) through the blood stream.

In the employment of actinotherapy there are three principal sources:

1. Carbonic arc.
2. Quartz mercury vapor tube.
3. The Tungsten arc.

All of these have their respective values and separate indications in different cases, according to the nature, extent and situation of the tuberculous lesions, the stage of the disease and the patients' "Resistance" to it. No one source is of universal value. So far as cases of pulmonary tuberculosis are concerned, nothing but failure will result if cases are treated when the patient's temperature is 100 degree F. or over. A rise of temperature over 100 degree F. is an indication that treatment should be stopped, and the patient kept at

rest in bed. Treatment can be resumed when the temperature falls to normal, and the dose lowered.

MANY MAY BE HELPED

With great care in finding the proper dosage for the particular individual a very large proportion of pulmonary cases can be helped toward recovery, including cases which had previously been on a down-grade. Such, at least, has been my experience. In the other types of tuberculosis, the non-pulmonary types, rapid improvement and cure result in the majority of cases treated if reasonable precautions are observed.

It is probably better to under-radiate the patient than to over-radiate him and see how rapidly we can pigment him, for tanning is not a therapeutic index. It has been shown by carefully studying the effects of actinic rays on the minute structures of the skin that overdosage will produce degeneration of the prickle cells associated with an accumulation of red blood cells and leucocytes in the blood vessels of the irradiated area, dilation of the capillaries, stasis, formation of leukocyte thrombi, and exudation of white blood cells. While the proper dosage of light has not yet been satisfactorily established, it is well to remember that a small dose will stimulate the tissues exposed, and that if a safe dose is exceeded, healthy tissue may be overstimulated or even destroyed.

INVOLUNTARY CYCLIC CONJUNCTIVITIS—REPORT OF FOUR CASES*

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During the last two years the writers have treated four cases of recurrent cyclic conjunctivitis occurring in males at the period of sexual involution, but have been unable to find a similar condition described in the literature. Conjunctivitis does occur in females during normal menstruation but cyclic attacks after menopause has been established are unknown. From the standpoints of etiology and of pathologic physiology the disturbance here described has been difficult to understand but endocrine influence may be a factor.

Case 1—J. W. Y., aged 56, a banker,

* From the Ophthalmologic and Neurologic Departments of the Battle Creek Sanitarium Clinic.

came not as a patient but merely to bring his brother. On his arrival he had a severe conjunctivitis for which he requested treatment by the ophthalmologist. The condition was present in the right eye only. The patient stated that he had been suffering from similar attacks every twenty-eight days regularly in the right eye, the attack lasting four or five days, ceasing spontaneously only to recur exactly on the 28th day. Similarly, the left eye was affected but had its own cycle of from twenty-one to twenty-three days. The eyes were not involved simultaneously except by coincidence. The syndrome had been present for two years.

He stated that he had had painstaking attention, from good ophthalmologists, before, during, and after attacks without obtaining relief. In a search for a focus of infection he had had a turbinectomy with curetttement of the ethmoids, a tonsillectomy, appendectomy and extraction of two teeth. The gallbladder had been found negative.

Examination: The irides were gray. The right eyelids were edematous, the conjunctivae acutely injected and much mucus was present. The inflammation began in the cul-de-sac, was at all times most marked in that region and spread from it in both directions. The left eyelids showed slight evidence of a receding inflammation. Twelve days later the left lids were in the stage of acute conjunctivitis. A culture was taken.

As the patient was highly intelligent and gave a clear history to the effect that silver nitrate, zinc, argyrol, mercurochrome, adrenalin, and boric acid with ice compresses had all been tried, the condition was treated with holocain, an astringent eye wash, and cold compresses. The patient was then referred for study from an endocrine standpoint.

When the culture, a complete physical examination supplemented by all the usual laboratory tests and an ordinary neurological examination revealed nothing abnormal, the case was examined from the standpoint of vegetative neurology. Here were found definite symptoms of a vegetative imbalance. Among the prominent findings were: frequency of winking, slowing of the pulse from ninety to fifty by pressure on the eye balls, mydriasis obtained by two or three drops of one to one thousand epinephrin in the eyes, extreme salivation by injection of pilocarpin, absent gag reflex, hyperacidity of the stomach, pylorospasm, frequent bowel acc-

tion, low blood pressure, cold and clammy hands and feet, hyperidrosis, pollakiuria and mydriasis. His basal metabolism was found to be minus eighteen and his glucose tolerance was as follows:

	At time given 1/2 hr.	1 hr.	2 hr.	3 hr.	4 hr.	
Blood Sugar.....	88	143	200	139	69	71 mg per 100 cc.
Urinary Sugar	9	37	107	365	225	6 mg per hr.

The patient stated that ophthalmologists had laughed at him and called him a freak, and the writers must confess that they too felt a tendency to consider the case lightly. On giving it serious thought, however, it seemed to us that there was only one idea worth while entertaining; namely, that the patient was at the period of sexual involution and while his cells of Leydig were hypoactive, whatever 'ovarian' tissue the patient might have in his body was taking the upper hand. In view of his hypometabolism, he was given thyroid substance, grain one-half, twice a day, and to overcome the testicular hypo-function he was given orchic substance grains V, t.i.d.

The patient left the institution and was not heard from for a year and a half. On his return to make a social call only, he stated his attacks had continued for two months after taking the medicine but the conjunctivitis then ceased entirely. He has never had conjunctivitis since.

Case II. A. R. W., aged 47, complained of pain in various parts of his body and stiffness. To economize space, the many symptoms of his condition will be omitted and only the general statement made that he was suffering from scleroderma diffusa. There was no neurosegmental distribution as occurs in some cases.

He also complained of a conjunctivitis that occurred in both eyes every twenty-eight days, lasting four or five days regardless of all treatment. It had been present for only three months. Examination of the eyes showed only a marked injection of the conjunctivae with much mucous discharge. No cultural growth was obtained on the usual media. The irides were gray. Examination from the standpoint of vegetative imbalance did not give the definite picture that had appeared in the first case. There were only a few symptoms that might be explained on some other basis. His glucose tolerance and basal metabolism were normal. The patient was advised to take orchic substance and to keep in touch with the writers. One year later a follow-up letter brought the following reply, "The condition (the scleroderma) is exactly the same. Have done

no doctoring or taken any medicine; have taken chiropractic treatments from two to three times weekly for one year with no results for betterment . . . and never have been troubled with any more periodic conjunctivitis eye trouble." (Note that he did not take the orchic substance).

Case III. V. M. G., Norwegian, aged 58, stated that he had been about the country a great deal during the last five years for treatment for a recurrent conjunctivitis and that he had had most thorough examinations without a positive diagnosis having been made. His eyes were separately involved, never simultaneously, so that he had conjunctivitis lasting a few days in either one or the other about every two weeks. He had not kept a careful record of dates however but was certain that the eyes were always alternately involved. The disturbance always cleared up spontaneously and was uninfluenced by treatment. The patient was definitely neurotic. As in the first case, a general examination gave very little information. The irides were gray. Examination from the standpoint of vegetative neurology gave the following symptoms: history of overwork, fatigability, both mental and physical, drowsiness, dry hair, bradycardia, hypotension, vasomotor disturbances, gastric hyperacidity, pylorospasm, low basal metabolism, and anhidrosis. The eye condition was typical of a severe acute catarrhal conjunctivitis but began at the cul-de-sac and spread, receding in the opposite order.

In view of our experience with the previous case, we immediately prescribed thyroid, grain one-half, after breakfast daily and orchic substance, grain V, t.i.d. The following two expected attacks began but never developed. Instead the condition assumed a new order, and occurred as follows: Left eye Sept. 22; right Oct. 21; right Nov. 17; left (very slight) Nov. 20; left Dec. 15. The dose of orchic substance was increased but we lost contact with the patient and do not know the subsequent history.

Case IV. Q. S. W., aged 55, with gray irides, suffered from an eczema of the scalp and chronic cholecystitis. He also complained as the others had of a periodic recurrent conjunctivitis. This appeared first on the third of August, then on the third of September and on the fourth of October in 1926. Local treatment never aborted the attacks and appeared to do very little good.

The patient was to come for a neurological examination but in the meantime his

Cases	Sex	Age at Onset	Nationality	Color of Irides	Laterality	Followed by Involvement in Other Eye	Bacteriology	Associated Condition	Intervals Between Attacks	Duration of Attack	Condition of Eyes Between Attacks	Influence of Local Treatment	Treatment	Duration After Treatment
I	M	54	Amer.	Gray	None	Never		Vegetative imbalance	28 days right 21 days left	4 to 5 days	Entirely negative	None	Thyroid and orchic subst.	2 months
II	M	47	Amer.	Gray	None	Alternately 28 and 21 days Simultaneously		Scleroderma diffusa	28 days	4 to 5 days	Entirely negative	None	Thyroid and orchic subst.	2 months
III	M	53	Nor.	Gray	Occasionally	Never		Constitutional neurotic	Before treatment not known. After treatment 27 to 29 days	3 to 4 days	Slight injection	5 years	Thyroid and orchic subst.	2 months
IV	M	55	Amer.	Gray	Simultaneously		None	Eczema of scalp	28 days	4 to 5 days	Entirely negative	None	Ceased spontaneously Modified by treatment Ceased spontaneously	2 months

TABLE I

eczema was treated and after the third attack, there was no recurrence of the conjunctivitis. The writers are inclined to consider this a case of spontaneous cure. If the eczema were the cause, we should be obliged to explain the absence of any conjunctivitis except for a few days each month.

For ease of comparison, the similarities and differences in the cases are shown in table 1.

Discussion: The condition described occurs in this small series in males beginning between the ages of 47 and 55 years. There seems to be nothing in common in these cases except sex, gray irides and the involutional period of life. The occurrence of gray eyes may be a coincidence. In the first case manifesting a definite vegetative imbalance with low basal metabolic rate, orchic substance and thyroid substance seemed to produce a rapid cure. Being unable to follow Case III we cannot discuss the result. It is our conception that a vegetative imbalance is merely evidence of a marked endocrine upset as the vegetative nervous system and the endocrines are one great system. We do not predicate that all males or that these patients have mixed gonad tissue but such a conception is useful in understanding the manifestations described. Certainly the monthly periodicity with a duration of a few days, with vascular dilation and mucous discharge with spontaneous remission is so characteristically female that a sex dyscrasia as a basis for the condition seems obvious. In the two cases of very short duration the cure was spontaneous. Since it is necessary to name the syndrome, the main characteristics suggest the name Involutional Cyclic Conjunctivitis.

SUMMARY

1. A syndrome apparently not hitherto described is presented and is called Involutional Cyclic Conjunctivitis.

2. The syndrome occurs in males at the involutional period (47 to 55 years), worse in those with a definite endocrine imbalance, ceasing spontaneously in others.

3. The characteristics are, attacks of conjunctivitis with mucous discharge, without infection, coming spontaneously at monthly intervals, frequently in one eye at a time, lasting three to five days, remitting spontaneously, uninfluenced by local treatment.

4. The condition is influenced by administration of orchic substance and by

correction of lowered basal metabolic rate by means of thyroid substance.

THE CANCER PROBLEM*

W. A. EVANS, M. D.
DETROIT

Among the important activities of the Wayne County Medical Society is its contribution to the cancer problem. Functioning in close co-operation with the American Society for the Control of Cancer, it has endeavored, first, to inform its membership of all advance in diagnosis and treatment and bring to them any other information of interest regarding malignancy, and, second, to call to the attention of the public the early signs and symptoms of cancer and to urge them to consult a physician at the first suspicions of such a condition.

The duties in this connection are assigned to the "Cancer Committee," a group selected because of their especial interest in this problem and their willingness to devote considerable time to its demands.

To accomplish its aims, the Society has inaugurated a "Cancer Week," during which time educational matter is brought to the attention of the public by pamphlets, speeches at various public gatherings, radio talks and press articles. In addition, free examinations are offered to the public at the several hospitals. To interest physicians, men of national prominence familiar with malignancy are asked to give teaching clinics and demonstrations and formal addresses.

CO-OPERATION OF LAY PRESS

The eighth annual such Cancer Week (February 28th to March 6th, 1928) has just passed into history, and a brief report of it should be of interest. Let it be said now that this work could not be satisfactorily carried on without the co-operation of the press, and the Society has been especially fortunate in that the Detroit Free Press, the Detroit News and the Detroit Times have manifested a fine spirit of co-operation, giving freely of space, and particularly of their advice in the arrangement of the material to be presented through their papers. If anyone ever doubted the power of the press in spread-

* Dr. W. A. Evans, to whom the Journal M. S. M. S. is indebted for this paper, prepared on short notice, is chairman of the Cancer Committee of the Wayne County Medical Society and also a member of the Detroit Health Commission.

ing medical propaganda, such doubt would be dispelled by observing the immediate response of the public to the articles which appeared during our last campaign. For instance, on the day breast cancers were discussed in the daily papers, the clinics were visited by patients desiring examinations for this type of disease, and on another day, when skin malignancy was emphasized, a response from patients suspicious that they were afflicted with lesions of such nature was noted.

The Society called upon Dr. William Patrick Healy, of New York, and Doctors Balfour and Rankin, of the Mayo Clinic, to assist in their campaign, Dr. Healey holding a teaching clinic at Harper Hospital on the first day of the campaign, and giving a formal paper in the evening before the Wayne County Medical Society on the "Diagnosis of Cancer by Gross Clinical Characteristics." The following week, to end the campaign, Doctors Balfour and Rankin took part in a Symposium on Gastrointestinal Malignancy, bringing to their hearers the results of treatment of such lesions by the surgical method.

While Dr. Healy is a gynecologist, his association at the Memorial Hospital in New York brings him into contact with all types of malignancy and his grasp of the subject was manifested in both his clinic and lecture. In his opinion, early diagnosis and classification and the proper choice and application of surgery and radiation result in reducing cancer deaths at least one-third. One gathered the impression that a proper application of radium and Roentgen therapy was replacing surgery as the treatment of choice in an increasing variety of lesions. Similar encouraging reports were made in connection with malignancy of the stomach and colon, Dr. Balfour reporting a relatively large extent of three year cures of cancer of the stomach and Dr. Rankin reporting control of malignancy of the colon by early resection of the diseased portion.

The number of patients presenting themselves for examination was in excess of the former clinics, and at several of the hospitals the congestion was so great that a considerable number were turned away. The estimated response to the appeal was about three thousand, and to date some 2,504 of these cases have been tabulated. Of this number, 403 were positive. That is, these cases either presented signs of definite cancer, doubtful cancer or precancerous lesions. The positive lesions were classified as follows:

	Positive	Doubtful	Precancerous
Mouth	3	12	18
Lip	2	16	4
Breast	34	28	Benign tumors 30
		Suspicious	
Stomach	4	49	
Colon	2	12	
		Doubtful	
Rectum	7	2	
Cervix	16	17	
Fundus	3	13	
Skin	12		
Epitheliomata	28		
Senile Keratosis	26		
Moles	28		
Benign tumors	41		
Larynx	2		
Angioma	1		
Bladder	2		
	Suspicious		
Cheek	1	Positive	Suspicious
Nose	2		2
Parotid glands	1		
	Suspicious		
Wart	1		
Jaw	1		
Sarcoma Neck	1		
Lymphoma	2		
	Positive		
Mastitis	4		
Naevus	3		

It was the impression of those making the examinations that very few neurasthenics presented themselves and that, while many cases did not show signs of malignancy, still they were suffering from some organic disease. Those associated in these examinations feel that on the whole Cancer Week is serving a good purpose and should be continued, with modifications.

A SUMMARY OF TREATMENTS FOR SYPHILIS EMPLOYED IN PONTIAC STATE HOSPITAL

P. V. WAGLEY, M. D.
PONTIAC, MICHIGAN

Summary of the compilation of statistical data of this institution covering the treatment of syphilis in its different forms, that is, general paralysis of the insane, meningeal and vascular types, extending over a period of some ten years, shows a wide variation in the results thus far obtained. During this time patients have been given the latest approved methods of treatment. A complete review, with percentages would be too detailed; a brief summary from my observation will be attempted. The instance of the high percentage occurring in this hospital has merely broadened our scope by furnishing us a wealth of material.

One of the first handicaps is the difficulty in commitment, either by the form now used, or by the reluctance on the part of the family to admit patients to a State Hospital. This, with the peculiarity of onset of general paralysis, accounts in a large number of cases for the paucity of early

treatment before hospitalization, and, to a degree, lowers the percentage of remissions.

With the advent of neo-salvarsan and mercury many improvements were noticed, particularly the clearing up of the tertiary symptoms, such as skin lesions and ulcers. A certain percentage of remissions were brought about by this form of treatment, but we feel this was especially so in the vascular and meningeal types.

Also, from our observation of other cases of general paralysis of the insane who received no treatment, but who from some recurrent infection stimulated an active leukocytosis, complete remissions have occurred.

The insight gained from these observations led ultimately to our latest venture, that of the treatment of patients with inoculation of some form of malaria plasmodium, and a subsequent course of medicinal treatment in the form of arsenic preparations. The one now used in this institution is tryparsamide. We feel that in this form of treatment we have the best combination and have obtained the best results. The malaria leaves the patient somewhat anemic, and at the advent of the arsenic he is rehabilitated, so to speak, and, at the same time, the arsenic serves to clear up any troublesome local lesions and, perhaps, to a degree is a spirocheticide.

Patients treated with this form of therapy have shown complete remissions where other recognized forms of treatment have failed completely. During the 14 months malaria has been used in this institution, a large number of patients have been inoculated, and, almost without exception, the progress of the disease has been slowed or arrested, to the extent of rendering the patient more comfortable than heretofore deemed possible. Also, along with this, has been a large percentage of complete remissions. Just how long these patients will remain comfortable, and to what degree they will again resume their station in life, as yet cannot be determined.

The mortality from this form of treatment would not exceed more than 1.5 per cent in this institution. We consider it a safe mode of therapy.

The blood and fluid reactions do not show a corresponding improvement. From our observation few have been completely reduced, but, again, sufficient time has not elapsed to offer statistical information. Our observation, as stated above, will not permit us to offer any definite correlation or

percentage between either the serological or clinical results.

As compared with the former methods used, the results so far obtained are so gratifying, not only from the physicians' standpoint, but also from the patients', the families' and the institutions' side, as to warrant a vigilant and comprehensive study of this treatment, with a view of not only rendering patients amenable to hospital discipline but of again establishing them in society.

TREATMENT OF SYPHILIS IN PONTIAC STATE HOSPITAL AS IT PERTAINS TO MENTAL CASES

S. A. BUTLER, M. D.

It seems unnecessary to mention the ancient drug which time has honored in the treatment of syphilis, namely mercury. It would be interesting to know how early mercury was used in the treatment of syphilis, and, when one thinks of the thousands of people who have been treated by this drug, and the apparent cures which have been achieved, one is reluctant to forego the use of this powerful remedy in staying the ravages of syphilis in any of its forms.

With the discovery of the Spirochaeta, together with the perfection of the blood Wassermann, the diagnosis of syphilis, which heretofore had been so difficult, became comparatively easy. The Wassermann reaction paved the way for a more rational treatment of syphilis, and, since the advent of salvarsan in 1910, the treatment of both early and late stages of the disease has made rapid progress.

In State Hospital work the physician, so far as syphilis is concerned, is dealing with the late results of the disease, and its manifestations are very protean in type. While the individual may be afflicted with a form of psychosis in which we believe the syphilis is merely co-incident, nevertheless, we think that his syphilis should receive active treatment, as we cannot dismiss the possibility that the toxins of syphilis may, in some manner, be a factor in upsetting an individual of this type of mental reactions.

It has been noted among physicians in State Hospitals, which were in the old days called asylums, that patients afflicted with general paralysis of the insane, and, in fact, other mental disturbances, showed great improvement after having suffered from some localized infection. As an illustration:—A patient with general paralysis

of the insane developed a severe infection of his hand, arm, a carbuncle or often a bed sore. If he survived the infection, it was noticed that almost invariably his mental symptoms were greatly improved. Why this took place no one was able to explain, but it was a universally recognized fact.

Perhaps it was because of this striking phenomena that research men were led to inquire why fever, localized inflammation, brought about these changes in the body metabolism.

No doubt the leukocytosis which was produced by these morbid changes was responsible. If localized infections were capable of producing improvement in patients thus afflicted, especially with general paralysis of the insane, how much more might be realized in the way of recovery if patients were inoculated with something which would cause a more severe constitutional reaction, and thus speed up all the body defensive mediums.

It was, no doubt, on this basis that patients were inoculated with malaria. In malaria the therapist seemed to have at his command a method of producing a severe reaction, which was at all times under his control. After the patient had been inoculated with 2 c.c. of blood from one suffering with malaria, and had experienced about a dozen sudden rises of temperature, his malaria could easily be aborted by quinine and arsenic.

We have tried the malaria in a number of cases in the Pontiac State Hospital and the mortality has been very low. We believe that the patients treated by the malaria parasitic infection have received greater benefit than from any form of treatment thus far employed.

It is too early to draw positive conclusions, for one must bear in mind that general paralysis of the insane is a disease which is characterized by remissions, even if no form of drug or bacteria therapy is used. Our experience extends only over a period of a little more than a year, but we believe that we can conservatively state that patients treated with malaria have become more easily cared for in the institution. Aside from the improvement in their general health, instead of being a noisy, destructive patient, they become quiet and more or less passive, which has an economic value in institutional care.

We have had cases that came to us early in their psychosis, that is, in the early stages paralysis of the insane, when their symptoms were possibly more the result of a toxic state. After these cases have

been given malarial treatment, followed by tryparsamide, they have been able to leave the hospital, and at the present time are comfortable and able, at least in part, to look after themselves.

We feel that the results we have obtained by the malarial treatment, followed by tryparsamide, have been good, and that if the same form of treatment was used early in the disease, before mental manifestations declared themselves, more satisfactory and lasting results might be secured.

A NOTE ON THE TREATMENT OF GENERAL PARALYSIS OF IN- SANE IN THE PONTIAC STATE HOSPITAL

R. GRANT JANES, M. D.

From observation of cases treated with malaria in this institution, the results obtained, when followed by intravenous tryparsamide, are more encouraging than any other method that has been used. Those who were quite demented frequently ceased to deteriorate; others in a manic state but whose memory, sense of orientation and higher mental faculties were well preserved, tended to show complete recovery and returned to their original work. A number who showed progressive dementia, are now in an arrested state although still harboring delusions and will probably never be better; but their lives are much prolonged. Two individuals developed pneumonia from one to two weeks following treatment, and died; but their condition was considered hopeless before treatment was first instituted.

On the whole, malarial treatment arrests the course of the infection. The resultant mental state is then dependent upon the amount of destruction of brain tissue that has occurred, and the subsidence of inflammatory process of parenchyma and meninges, and the freedom of brain from action of the syphilitic toxin. This seems to be fairly well accomplished by malaria.

GYNATRESIA—A REPORT OF TWO CASES

B. W. MALFROID, M. D.
FLINT, MICHIGAN

Genital atresias cannot be fully understood without a definite knowledge of the major embryological processes occurring in the development of the human pelvis.

At about the end of the fourth week of

embryonal life in the human a definite differentiation of tissue is noted forming on either side of the lower third of the body. These are known as the Wolffian bodies. They soon develop a tube-like structure which runs parallel to the long axis of the embryo, and the lower end becomes attached to the cloaca.

A week or two later the elements of the genital glands appear just inside the Wolffian bodies. These eventually become, in the female, the ovaries.

At about this same time there are seen developing just external to the Wolffian bodies two solid cylindrical masses which extend to the urogenital sinus. These are the Mullerian ducts. From these are developed the entire female genital tract to the vaginal introitus. Malformations of the genital tract must always point to a lack of proper development or fusion of these ducts.

At first the Mullerian ducts are solid and extend to the urogenital sinus as distinct unfused cylindrical tubes. In the normal development Muller's ducts run in very close approximation throughout the lower half and eventually fuse to form a unified structure. The upper half remains separated and eventually is differentiated to form the fallopian tubes. The upper part of the fused structure acquires a lumen first, while the lower portion which eventually forms the vagina, remains as a solid cylinder. This fusion takes place about the ninth week of embryologic life. At this time the uterus is divided into two hollow compartments. The separate uterine cavities exist until about the fifth month when the two are fused to make the one cavity. At about this same time the uterus becomes differentiated from the vagina by the development of the cervix. It is now assuming the form of a separate distinctive organ. In the following month the uterus develops muscle fibres and later the differentiation of special tissue is noted. During this latter period the vaginal tube has now become hollowed out and at the terminal end of the tube a specialization of tissues occur and the hymen is formed.

This rather brief resume covers the essentials of the embryology involved in malformations of the female genital tract.

CASE REPORTS

The first case that I wish to present is that of a young girl of fifteen. When first seen she complained of severe lower abdominal pain, crampy in character, and a continuous dull sacro iliac backache. She had always been in good health up to four months ago. Her menses began eight

months before. The first period was attended with some lower abdominal pain and the flow lasted for two days. Each period was accompanied with a greater amount of discomfort and gradually the lower abdominal pain became steady with but short intervals of relief. The menses were 2-3/26-30 day type and the flow was scanty. The last period occurred three weeks before, she flowed for about three days. The pain has become so severe and so continuous that the patient has been unable to secure but little sleep. On examination she had a temperature of 99.6; pulse 100; respiration 18; skin was dry but smooth. The head, neck and thorax elicited no pathology. Chest was normal as to size, sound and rhythm; systolic pressure was 98, diastolic 68. On inspection of the abdomen there was a definite mass discernable in the lower left quadrant. On palpation this mass was found to extend from the left parietal wall to just beyond the midline and from the level of the umbilicus downward into the true pelvis. It was doughy in consistency. The external genitalia were normal in contour but had a bluish discoloration. The left labia was pushed outward. The urethra appeared normal and the hymen had not been ruptured. The opening in the hymen was about 2 cms. in diameter. Rectal examination disclosed evidence of a fluctuating mass pointing into the introitus.

Laboratory findings were as follows: The urine was negative; R.B.C. 4,200,000. Leukocytes 12,400. Polys 79 per cent. Diagnosis of a gynatresia was made. Usual pre-operative treatment was given; Lithotomy position; skin preparation of 2 per cent mercurochrome. The hymen was dilated and on vaginal examination it was noted that the left wall of the vagina was pushed into the introitus, almost completely filling it up. A crucial incision was made in the wall and some of the tissue removed, about 1000 c.c. of thick, tarry, non-clotted blood mixed with some shreds, poured out under considerable pressure. Now the normal vagina could be examined, as the abdominal and pelvic mass had collapsed with the evacuation of this material. The normal cervix was noted and a small uterus was mapped out. The left border appeared to be continuous with a thickened mass of tissue, whereas the right border was well outlined. The right ovary could be palpated. On palpation through the incision an indefinite thickened smooth wall cavity was noted. We were unable to secure permission to do a laparotomy to clinch our diagnosis. She made an uneventful post-operative recovery. I have examined her since and she claims to have no distress whatsoever. I took occasion to examine her during a menstrual period and found a small amount of blood escaping through the opening in the left side as well as from the normal cervix. I have been unable to palpate anything in this left side which I would feel justified in calling a cervix or uterus. However in view of the history and the operative findings I feel warranted in the diagnosis of a uterus either didelphys or pseudodidelphys with an atresia of the left vagina.

The second case which I am going to present is quite interesting for adult females without any evidence of a uterus are rare. Miss L. P., age 23, engaged to be married, consulted me February, 1927. Her only complaint was that she had never menstruated. She has never experienced any type of a vicarious menstrual phenomena. With the exception of a period of approximately nine months during her thirteenth year she has always been in excellent health. During that nine months

she suffered a great deal of lower abdominal pain and claims that for several weeks she was practically bed ridden. Her recovery was slow. Her family history was unimportant. On physical examination she had the appearance of a well developed female. Her voice was normally pitched; skin was smooth and moist; and sclerae was clear. Her reflexes showed no abnormality. The nose, mouth and throat showed no pathology. The thyroid was normal in consistency and not enlarged. There was no evidence of a cervical adenopathy. The breasts were dome shaped, nulliparous in type. No pathology was noted in the chest. The heart was normal as to size, sound and rhythm; pulse rate of 80; systolic pressure 118; diastolic 70. The abdomen had a normal contour; there was no tympany; no areas of pain or rigidity. The mons veneris had normal fat content and the hair distribution was distinctly feminine in type. The labia were normal in appearance; the clitoris was not hooded, or enlarged. The urethra showed no abnormality. The hymen was imperforated. On rectal examination a definite thickened band could be palpated, extending from just posterior to the hymen, downward and backwards as far as the palpating finger could reach. Small masses the size and consistency of normal ovaries were palpated in either iliac fossa. Blood and urine examinations were negative. Operation was performed on February 14, 1927. The usual pre-operative medication was given. With the patient in the lithotomy position, and the field prepared, the hymen was incised and the redundant tissue removed. Just posterior to the vagina a dense thickened cylindrical mass was noted. This was incised and found to be a tubular structure the inner wall being glistening in character. The walls were collapsed and adherent. The adhesions were thin and separated quite readily. The tube followed the normal direction of the vagina. It was followed for about 11 cms. where it seemed to end blindly. No evidence of uterine tissue was found.

Dorsal position was obtained and skin preparation of picric acid. Midline incision was made extending from about two inches below umbilicus down to symphysis. Peritoneum was opened without difficulty. Patient was placed in the Trendelenburg position and the field carefully taped off. Careful exploration revealed the following condition. The ovaries were in about the normal position. The infundibulopelvic ligaments were small, made up for the most part of the small meso salpingx. The tubes were normal in appearance, the fimbriae were patent, the tubes were about nine cms. in length. The uterine ends were buried about 2.5 cms. apart in a bed of loose connective tissue just beneath a rather high reflection of the bladder fold. With an assistant holding his fingers in the vaginal tube careful palpation was made. The vaginal tube extended up into this tissue mass just below the bladder fold and the tubes apparently opened into the vagina though no definite opening could be demonstrated. No evidence of uterine tissue could be found. A rather normal appendix was removed in the usual fashion and a small section of the left ovary was taken for histologic diagnosis. Closure was made in the usual fashion. The vaginal tube was now packed with thick vaseline, great care being taken to balloon it out as much as possible. Post operative convalescence was uneventful. She was examined on the twelfth post-operative day. The vaseline had practically all been discharged. It was repacked and the

patient was asked to report in about ten days. She was not seen for approximately a month. The vagina now admitted two fingers for about ten cms. without discomfort. There were a few fine adhesions which were easily broken. This patient was married about eight weeks following the operation. I have had several occasions to examine her since and find that the vagina has remained patent. She suffers no discomfort and claims to have normal sexual reactions.

PATHOLOGICAL REPORT

Appendix. Micro. Glandularis shows a catarrhal reaction; diffuse eosinophilic infiltration, hyalinization of submucosa. Atrophy of muscularis. Paravascular round cell infiltration of peritoneum. Diag. Chronic Appendicitis chronic peritonitis.

Ovary shows hyalinization of the germinal epithelium, and some hyalinization of the stroma, follicular cysts are present and a partially developed corpus luteum. There is a deposition of haematoxylin in one area from former hemorrhage. Diag. Ovarian tissue undergoing some hyalinization.

This case presents two possibilities to me. The first is that of a normal fusion of the Mullerian tubes but a lack of tissue differentiation so that a distinct uterine body was never formed. The second possibility, and I believe a plausible one is that we were here dealing with a case of a dromimentary lightly functioning uterus with an atresia of the vagina. That when the normal menses began the atresia was not noted or at least not treated. The accumulated menstrual blood, because of the pressure exerted cause a necrosis of the poorly developed uterine tissue and nature slowly reabsorbed the blood and the normal uterine tissue was replaced with fibrous connective tissue.

PREVENTION OF HEMORRHAGE FROM TONSILLECTOMY

H. T. GRAY, M.D.
OWOSO, MICH

Many articles have been written about various methods for the control of hemorrhage during and after tonsillectomy. Many operators claim that they find it necessary to apply ligatures to bleeding points following the removal of adult tonsils. I believe that this is very rarely necessary if certain routine precautions are observed before all tonsillectomies and proper treatment administered during and after the operations.

In the last five years we have operated more than one thousand cases without any

serious hemorrhage in any case and most cases very nearly bloodless. We believe that any experienced nose and throat surgeon could do as well by using the same methods.

The following routine precautions and methods are used in all cases where it is possible. An examination is made of the patient's nose, throat and chest; a urinalysis is made and coagulation test of the blood and in adult cases the blood pressure is taken. If the patient has diabetes mellitus he is not operated. If the coagulation time is too long, if the blood pressure is much too high, or if the history of the case indicates that he may be a hemophiliac, then he is advised to not have an operation unless treatment improves the blood condition sufficiently.

PRECAUTIONARY AGENTS

Beginning three days before the operation the patient is given calcium lactate gr. V, four times a day and about 45 minutes before operation an adult is given one hypo of Hyoscine gr. 1/100, morphine gr. 1/4, and cactine gr. 1/67, combined with 2 c.c. of hemostatic serum (P. D. & Co.). Children are given 2 c.c. of hemostatic serum, but usually no morphine unless they are large and strong, then morphine gr. 1/10, will help prevent pain and keep them more quiet, following the operation. In adult cases a 2 per cent solution of Novocain 5iv combined with 1 to 1000 solution Adrenalin Chloride m viii is injected around each tonsil (after they have been swabbed with a 2 per cent Mercurochrome solution). Then tonsils are very carefully dissected so that the pillars are not cut nor injured, then the tonsils are removed with a Tyding or Brown snare.

A gauze pad saturated with a 12 per cent Neosilvol solution is applied immediately with a goose neck forceps and pressure made with it for 3 or 4 minutes and later, if there is any oozing of blood, a pad saturated with Glycerite of Tannic acid is applied with pressure. The patient is put to bed with the head and shoulders high, an ice bag applied to the throat, an ice bag to the head and a hot water bag to the feet.

I should explain that we have the advantage of private hospital rooms and a nurse with special training, to care for these patients and be in constant attendance following operations, which conditions can not always be obtained in general hospitals.

In rare cases where there is a tendency

to bleed following operations in spite of these precautions, then another hypo. of Hemostatic Serum is administered and a sponge saturated with Glycerite of Tannic acid is again applied, with a goose neck forceps and gentle pressure made for a few minutes.

We realize that not one step in this technique is new to the profession, but it is a combination of prevention and methods of treatment that has proven successful and made the use of ligatures unnecessary.

CHRONIC DUODENAL ILEUS

J. E. BELLAS, M.D.
MARQUETTE, MICHIGAN

Considerable interest has been aroused of late in this country and abroad, with regard to the condition variously known as chronic gastro-mesenteric ileus, chronic duodenal ileus, and chronic duodenal stasis. This condition consists essentially of a chronic dilatation of the duodenum caused by interference with the onward passage of contents as a result of obstructive pathological or mechanical conditions, usually at the terminal end of the duodenum.

It has been known to exist for at least 20 years, but apparently it has not received the attention that its importance deserves. The fact that there is no description of this entity in most of the standard textbooks of today, beyond a mere mention, is evidence of this. Recently, however, several very good articles have appeared on the subject, e.g. by Wilkie, Bloodgood, Horsley, etc.

PREDISPOSING MORPHOLOGY

Anatomy and etiology—The duodenum is universally divided into four parts: the superior, the descending, the transverse, and the ascending, the terminal portion ending in the duodeno-jejunal junction. This junction is marked by the attachment of the ligament of Treitz to its superior surface, whereby it receives some support, and by the fact that the superior mesenteric vessels in their downward course to become distributed in the folds of the mesentery, cross just proximal to this point. Any condition which may partially hinder or obstruct the advance of the duodenal contents, will give rise to the condition known as chronic duodenal ileus. The following conditions may operate as the cause:

1. Kinks by congenital bands, or by the ligament of Treitz.
2. Kinks by inflammatory adhesions, e.g. from adjacent inflamed glands.
3. Constriction of lumen by an intrinsic or extrinsic tumor.
4. Valve-like structures within the lumen, narrowing the latter.
5. Complete atresia. (congenital).
6. Chronic dilatation of the duodenum without obstruction at the terminal end, due to a disturbance of the sympathetic nerve supply to the duodenum.
7. Compression of the terminal end of the duodenum between the superior mesenteric vessels and the aorta.

The latter is the most common, and therefore the most important cause, and is the one with which this paper is concerned.

My interest in this condition was first stimulated by an article written by James McKenty¹ of Winnipeg, in 1918, in which he describes two cases severe enough to require operation, and observations on cases with milder degrees of obstruction. He reported three instances in the surgical literature in which the operation of duodeno-jejunostomy for this condition was done or suggested prior to the publication of his paper; namely, by Stavely², in 1907, by Beer³, in 1914, and by Bloodgood, who was probably the first to stimulate interest in this condition, but was not the first to perform the operation. During the years that followed, notably between 1923 and 1925, I had the good fortune to witness two cases while assistant in the Clinic of Dr. Clifford U. Collins, of Peoria, Ill.

In October 1926, while attending the Cleveland Convention of the Inter-State Post Graduate Association of North America, I had the opportunity of listening to an illuminating paper by Mr. Wilkie, Professor of Surgery, University of Edinburgh, and by a fortunate coincidence, while visiting the Cleveland Clinic, was enabled to see George W. Crile perform a duodeno-jejunostomy on a typical case.

That the condition is comparatively rare is apparently evident, but one gets the impression that it is by no means uncommon, and that a routine search for this condition in surgery of the upper abdomen, would disclose its unsuspected presence in a larger number of cases. When discovered, it is best to give heed to Dr. Blood-

good's observations, and ascertain whether there is not a poised giant cecum associated, which is dragging down upon the root of the mesentery and thus constricting the duodenum between the superior mesenteric vessels and the aorta.

SYMPTOMS OF CHRONIC ILEUS

These may be described as local and constitutional. The local symptoms arise from the mechanical obstruction to the normal exit of duodenal contents while the constitutional symptoms are caused by the chronic toxemia that necessarily develops as a result of absorption of toxic products in stasis. The severity of the symptoms varies with the degree of obstruction and the amount of retention of the duodenal contents. From the mild cases which may be characterized mainly by a sense of fullness after food and occasional sense of nausea, the symptoms may become so aggravated as to cause daily distress. Belching and bloating are more marked in these severe cases, and there is definite pain usually in the right upper quadrant, but occasionally over the left upper abdomen. It is thus easy to see how readily this condition may be confused with gallbladder disease. Disturbance with a large variety of foods is complained of, but there appears to be no similarity in the kind of

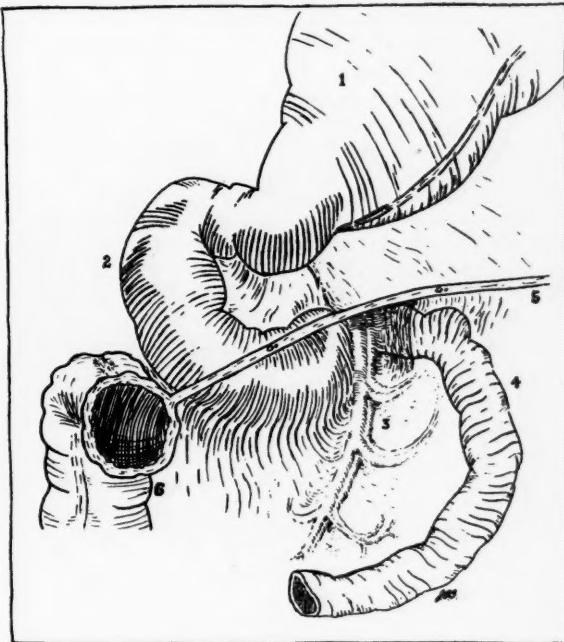


Figure 1
Drawing of Duodenal Compression by the Superior Mesenteric Vessels. Semi-diagrammatic.

1. Stomach.
2. Dilated Duodenum.
3. Superior Mesenteric Vessels.
4. Collapsed Jejunum beyond obstruction.
5. Cut Transverse Meso-colon.
6. Haptic Flexure of large bowel.

foods among the patients. The most severe cases may have recurring attacks of nausea and vomiting. Frequently there is associated anorexia, headache, and loss of strength. The spells of distress appear to have a tendency to periodicity, recurring somewhat irregularly every four or five weeks. These patients are fairly comfortable in the intervals. Fluoroscopic and radiographic examinations will sometimes reveal the dilated duodenum during the stage of active symptoms, but this is frequently difficult to demonstrate. Most cases are diagnosed at operation.

CHOICE OF OPERATION

- a. Gastro-enterostomy has been advocated and performed, but the consensus of opinion is that it fails to produce the most satisfactory results.
- b. Resection of the right colon up to the mid-colic artery. This is essentially Bloodgood's procedure, and in his hands has given very good results. The purpose of this operation is to abolish permanently the constricting action on the duodeno-jejunal junction by the pull on the root of the mesentery.
- c. Devine's operation. This takes care of those cases where there is chronic dilatation of the duodenum without obstruction at its terminal end. Devine considers these cases as being probably due to an imbalanced or abnormal stimulation by the sympathetic nerve supply to the duodenum. Duodeno-jejunostomy does not help these cases and Devine does a pyloric exclusion operation through the middle of the stomach followed by an end to side gastro-jejunostomy through an opening in the transverse mesocolon.
- d. Duodeno-jejunostomy appears to be the favored operation by most surgeons. Curiously, this operation was first suggested by Dr. Bloodgood but has never been performed by him for this condition. Most surgeons feel that a duodeno-jejunostomy combined, when necessary, with colopexy of the right colon and plication of the giant cecum will accomplish all that the more radical resection of the right colon would do.

I have had two cases of duodenal ileus within the past year.

BLOATING AFTER MEALS

Case I—A young woman, school-teacher, aged 25, first presented herself in August 1926 with the following complaints:

1. Stomach trouble.
2. Anorexia.
3. Insomnia.
4. Nervousness.
5. Tendency to constipation.
6. Chronic backache.

She has been troubled with most of these for the last twelve years, but her indigestion has been her most predominant complaint. The most distressful symptoms were bloating and belching, which came on especially after meals. The belching spoiled her appetite and made her miss meals. She gave a wide variety of foods as being the

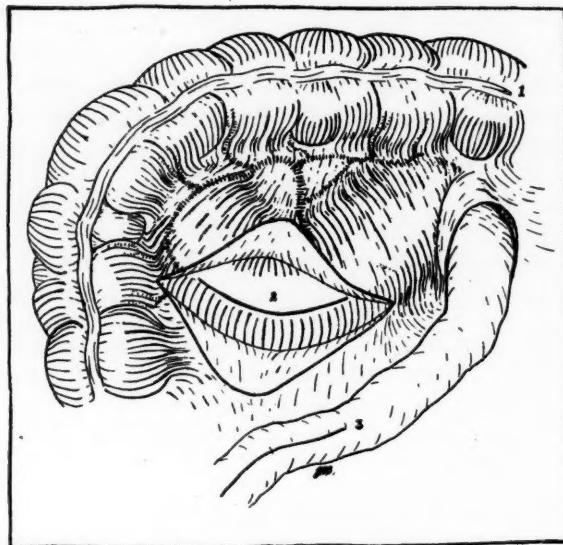


Figure 2

Location of incisions for Duodeno-Jejunostomy.

1. Transverse Colon.
2. Incision in exposed dilated Duodenum.
3. Incision in Jejunum.

cause of disturbance. Of these, meats, fat and fried foods, pastries and pies caused the most distress, and often caused sour or bitter eructations. In addition she had disturbances with all breads, especially white, while whole wheat bread was the least troublesome; also with corn, all canned vegetables, potatoes, eggs, lettuce, and carrots. There would be periods when any of these foods, and even those not mentioned, would give greater distress. Frequently, she would have an ache in the epigastrium which at times would be aggravated to the point of severe pain in the upper abdomen. She has never been jaundiced. She has been able to control the constipation for the most part by exercise and by the excess of vegetables and fruits in her diet. She would be continually harassed by a feeling of weakness, by a lack of "pep", by mental lethargy. There were no urinary disturbances, and no cardiorespiratory symptoms. Her usual weight was 120 pounds while her present weight was 113 pounds. Her menses began at 12. The family and past history are irrelevant to the case.

Physical Examination—General appearance—a medium built, somewhat undernourished young woman of decidedly dyspeptic facies. Head and sinuses—no evidence of pathology. Eyes, ears, throat—no evidence of disturbance or pathology. Nose—nasal obstruction on right from deviated septum. Neck—no enlarged glands. No goitre. Lungs—no dullness or rales. No post-tussic apical crepitations. Breasts—no masses or other pathology discoverable. Heart—not enlarged, sounds are clear, there are no murmurs. Blood pressure—systolic 122, diastolic 85. Abdomen—there is definite tenderness on pressure over the right upper quadrant especially during a deep inspiration. This was also present in the mid-epigastrium. There is tenderness over the right lower abdomen, but none elsewhere. No costo-vertebral tenderness. Nervous system—reflexes are hyperactive, but there are no abnormal findings to suggest organic nerve pathology. Pelvic examination—a complete retrodisplacement of the uterus was found. Rectum—no pathology palpable. The corpus uteri was felt resting on the rectum.

Laboratory Reports:

1. Urine—no pathologic findings.
2. Blood—Kahn Pptn Test—Negative. Blood Count—R.B.C. 4,680,000, W.B.C. 9,400, Hem 70%.
3. X-Ray of lungs—negative for tuberculosis.

Diagnosis:

1. Chronic cholecystitis with possible associated appendicitis.
2. Retrodisplacement of uterus.

The patient returned in December 1926, having decided to undergo an operation for relief.

TECHNIQUE OF OPERATION

The abdomen was opened through an upper right rectus incision. The bulging stomach was drawn aside and the gallbladder examined. It was found of normal size, bluish-white, movable, involved in no adhesions and containing no stones. The pelvic organs were examined and the uterus found retrodisplaced. The cecum, which was not enlarged, was drawn up and an elongated appendix removed. The cause of the indigestion evidently not being caused by the gallbladder, other causes were looked for. It was soon seen that the duodenum was dilated markedly above the normal. The duodenum was followed to the duodeno-jejunal junction. From this point the jejunum was seen to be collapsed. Elevation of the root of the mesentery caused gas to be propelled into the collapsed jejunum from the duodenum. This confirmed the presence and the cause of the dilatation, namely, pressure on the terminal duodenum by the superior mesenteric vessels at the root of the mesentery. The transverse mesocolon was kept reflected and an opening made on the right side to give access to the third portion of duodenum. Mobilization of the duodenum was found difficult until some congenital bands or adhesions on the right side were liberated. This portion of the duodenum was then brought through the opening in the mesentery, clamps applied to it and to an adjoining loop of jejunum about 5 inches from the junction. Liberation of the adhesions had given rise to a loss of peritoneal covering to a large part of the duodenum. Dependence was placed, however, on the adhesive properties of the jejunal peritoneal layer and a careful duodeno-jejunostomy was done. The edges of the opening of the mesocolon were attached to the duodenum proximal to the anastomosis. The loops of the jejunum on either side of the anastomosis were fixed by attachment to the adjacent mesocolon as further precaution against the formation of troublesome kinks. Gas was seen to pass from the duodenum through the anastomosis into the jejunum. The transverse mesocolon was brought over the anastomosis, the abdominal contents replaced and the abdomen closed.

Pathological Findings:

1. Subacute appendicitis. The mucus membrane showed hemorrhagic ecchymosis throughout the distal third of its length.
2. Chronic duodenal stasis.

Progress—The post-operative convalescence was practically uneventful. Two weeks later a Crossen-Gilliam suspension of the uterus was done. Patient noticed a marked improvement within a very short time. She ceased to be troubled with belching. Her appetite immediately improved. Foods that she thought would invariably cause indigestion were tolerated in a fashion that surprised the patient. During the

period of adjustment the patient increased the range of her diet very cautiously but as time went on new foods were gradually added until at the present time the patient partakes of a wide variety of foods, and positively enjoys her meals. During the past year it was necessary to give her treatments for a secondary anemia, but this has now improved. She has resumed her teaching duties with greater vigor and now weighs 123 pounds.

COMMENT

Two points are worthy of note in this case. First, the remarkable almost prompt relief from symptoms. It is practically a year since operation and progressive improvement is steadily observed as the patient discovers wider latitudes of dietary freedom. True, this is not always the case in conditions of this kind, but most observers report at least an improvement. Secondly, it will be observed that in the above case, the onset of the indigestion began at the age of puberty. It had not been present before that time but had progressively become more marked with advancing years. It is conceivable that in a few cases at least, the stimulus to growth manifesting itself at this period, would bring about a general enlargement of the abdominal structures, thus causing more compression of the terminal end of the duodenum by the superior mesenteric vessels in conjunction with a heavier drag on the root of the mesentery. It would seem logical to assume that there may be a relation between puberty and the development of chronic dilatation of the duodenum.

BELCHING PRESENTING SYMPTOMS

Case II—A young unmarried girl aged twenty-six, of rather dyspeptic facies, came in for investigation on November 28, 1927, with the general complaint of indigestion. She has had stomach trouble since 1920. This has been characterized chiefly by belching and bloating, but also by pain in the upper abdomen, nausea, heartburn, bitter eructations, and anorexia. This trouble has recurred off and on, but has been more troublesome for the past year. She has been particularly distressed in the last few months. The belching would come on at all hours and would be irrespective of the kind of food or the time of meals. Even water would induce belching, which would last for hours. Her pain was located in the right upper abdomen and in the mid-epigastrium, the latter being somewhat relieved by belching. She has been afraid to eat because of belching. She has never been jaundiced.

The physical examination elicited tenderness on pressure over the right upper abdomen, especially during deep inspiration. There was also a suggestion of a deep resistance or a mass in the right upper quadrant. The diagnosis of chronic duodenal ileus or chronic cholecystitis was made.

Operation revealed a large inflated bulging stomach and a patulous pylorus. The duodenum was not readily visible as it was bound down by peritoneal folds which involved it and the gall-

bladder and the duodenum itself seemed to dip posteriorly out of sight. The gallbladder was bluish-white, thin-walled, emptied easily on pressure, contained no stones, and was apparently normal. The transverse mesocolon was elevated and reflected and the jejunum was seen to be inflated. The dilated jejunum was quickly followed and a point was reached about seven to eight inches beyond the junction where the bowel was found collapsed. There was no obstruction at this point and the supposition was that in elevating the mesocolon the obstruction by the structures in the root of the mesentery, was momentarily relieved and allowed the escape of gas into the jejunum from the duodenum. The dilated duodenum could only be seen when an opening was made in the mesocolon to expose the third portion. A duodeno-jejunostomy was done.

Sufficient time has not elapsed to judge the ultimate results in this case, but at this time, eight weeks after the operation, on a fairly general diet, she appears to have gotten rid of her most troublesome symptom, belching.

The fact that in such a moderate surgical practice as mine, I have been able to unearth two of these cases within one year, would seem to suggest that this condition is not as infrequent as some recent writers* would indicate.

* Bloom, A. R. and Arenz R. A. Duodenal Stasis. J.A.M.A. Oct. 15, 1927.

SUMMARY

1. The anatomy of the duodenum is reviewed and possible causes of duodenal obstruction outlined.
2. Chronic duodenal ileus is a clinical entity by no means infrequent, and its incidence varies in direct proportion to the observation of the surgeon.
3. The symptoms closely resemble those of chronic cholecystitis and it may be difficult to differentiate the two.
4. Duodeno-jejunostomy in conjunction, when necessary, with colopexy and plication of giant cecum, is the most favored operation.
5. Two cases of chronic dilatation of the duodenum are presented.
6. The changes occurring as a result of puberty are suggested as an etiologic factor in the development of some cases of chronic duodenal ileus.

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SYMPOSIUM ON TUBERCULOSIS*

THE RECEIVING HOSPITAL STAFF DETROIT, MICHIGAN

OCULAR TUBERCULOSIS EDGAR E. POOS, M.D.

Ocular tuberculosis may be divided into primary tuberculosis, which is exceedingly rare, and the secondary type, which is more common. It can also be divided into the acute, in which belong the cases of solitary tubercle of the eye, diffuse tuberculosis of the choroid, acute tuberculous iritis. These cases run a relatively rapid and malignant course, loss of the eye and often death of the patient ensuing. The lesions do not differ from active tuberculous lesions elsewhere in the body, and there is no doubt that they result from direct blood metastasis. To this type belongs also miliary tuberculosis of the choroid which is usually a terminal manifestation of the systemic disease. To the chronic type of ocular tuberculosis belong the far more frequent cases of tuberculous sclerites, keratitis, chronic iritis and cyclitis. (Verhoeff). These cases run an extremely slow course, are almost never fatal, and healing ultimately occurs, followed by frequent recurrences.

Therefore I will take up some of the characteristic lesions of tuberculosis of the eye.

SCROFULOUS LID ULCERS

Scrofulous ulcers develop generally as a result of caries of the orbital margin and like those that originate in suppurations of lymph glands, present an irregular shape and reddened or livid borders, either take a long time to heal or keep constantly recurring and in their later stages are distinctly puckered, often causing a disfiguring scar which is adherent to the base and produces ectropion.

Lupus also occurs on the lids with its characteristic nodules or scars.

TUBERCULOUS CONJUNCTIVA RARE

Tuberculosis of the conjunctiva is a rare affection. Eyre having met it in eight out of twenty-five thousand new ophthalmic cases in London. It may be primary,

* The subject of Tuberculosis was discussed in its various phases at the regular meeting of the Receiving Hospital, Detroit, February 8, 1928. The following pages include a summary report of the discussions by various members of the staff. Dr. David Clark, chief of the staff, presided. The Receiving Hospital is the City Hospital of Detroit and the teaching hospital in connection with the Detroit College of Medicine and Surgery. The capacity is 596 beds. The staff is composed of physicians and surgeons who are also on the attending and consulting staffs of a majority of the other hospitals of the city.

but generally secondary to nasal or laryngeal tuberculosis. Females are affected slightly more than males. Palpebral conjunctiva is more often the seat of the lesion than the bulbar. Lower lid more often than the upper. The cornea often is the seat of superficial inflammation. Iritis may develop and while the preauricular gland on affected side is hard, swollen and tender, it does not often suppurate. The submaxillary and cervical glands may be infiltrated.

Sattler gives the clinical features as follows: first group characterized by small miliary ulcers, which may coalesce, generally attacking the palpebral, but sometimes affecting the bulbar conjunctiva: second group, characterized by grayish or yellowish subconjunctival nodules, varying in size, but rarely larger than a hempseed: third group, characterized by florid, hypertrophied papillae and rounded outgrowths of granulation tissue, springing from the palpebral conjunctiva or situated in the fornices, recurring after removal and accompanied by edema and thickening of the lids: fourth group, "lupus" of the conjunctiva characterized by numerous pedunculated cockscomb-like excrescences in the fornices of a jelly-like consistency often showing more or less ulceration. To these, Eyre adds another group to cover those cases characterized by distinctly pedunculated tumors, microscopically resembling papillomata, cases without involvement of the subconjunctival tissue, or production of any symptoms other than mechanical ones. Pain, as a rule, is not a prominent symptom. A moderate discharge is present.

Stephenson has cured one case by X-ray treatment. If this means fails, early and complete removal of the diseased conjunctival tissue and enucleation of swollen preauricular glands should be undertaken. After removal of tissue Aristol or Iodoform are to be applied.

LACRIMAL GLAND INVOLVEMENT

Tuberculosis of the lacrimal gland has been described by Doctors Lapersonne, L. Muller, Baas, Salzer and Suskind.

The clinical features are the presence of a hard tumor, about the size of an almond, situated at the upper and outer part of the orbit. The tumor is movable and is not adherent to the skin. In one half of the cases the growth was rapid, two or three months, and suggested sarcoma. In the other half of the cases the disease pro-

gressed slowly, three to four years. In only one case was pain present, at the beginning. In three cases the skin over the tumor was red and swollen; nearly all the cases showed tuberculosis elsewhere. Often there is an associated swelling of the parotid gland on the same side. The movement of the eye was not limited. It is evident that the nature of the tumor in these cases can be determined only after removal.

Microscopic examination shows typical miliary or submiliary tubercles, with more or less round cell infiltration. The tubercle bacillus was found in less than half the reported cases. Thus far caseation has not been reported. Surgical intervention will be in order only after medical and hygienic measures fail.

INCIDENCE CORNEAL TUBERCULOSIS

About one in ten of interstitial keratitis cases are due to tuberculosis. In keratitis profunda cases tuberculosis is characterized by a gray opacity of the cornea situated in the middle and deep layers of the cornea, over which the corneal surface is gray and punctate but not depressed. Seen with the naked eye, the opacity looks uniformly gray, while with the magnifying glass it may be resolved into dots and maculae without ulceration. Attacks adults in one eye, lasts four to eight weeks, but may recur. These cases are often tubercular in origin.

Sclerosing keratitis often accompanies a scleritis, if a scleritic nodule is situated near the margin of the cornea there develops in the adjacent portion of the latter an opacity which is situated in the deeper layers. Vascularization is slight, it heals without ulceration, the greater part of the opacity remains permanently and ultimately becomes bluish white like the adjacent sclera, usually attacks young females.

In a great number of patients with phlyctenular conjunctivitis keratitis there are changes which are certainly tuberculous, often appearing as serofulous lesions of glands, bones and often pulmonary tuberculosis. But, even if showing no active process, often have a latent one. If then the phlyctenules are not actual tubercular nodules and yet on the other hand they occur with such preponderating frequency in tuberculous subjects we should not be far out in explaining them as being due to the action of toxic substances in the same way as for example nodules develop in tuberculous individuals.

after rubbing tuberculin ointment in the skin (Moro).

According to Verhoeff, they are probably due to anaphylaxis in tubercular subjects.

IRIS TUBERCULOUS TREATMENT

When tuberculosis of the iris assumes the solitary form, iritis may be absent for considerable time. Such cases were described by Von Graefe under the name of granuloma of the iris.

The tubercular nature of such growths was first demonstrated by Haab. Tuberclle is generally found between the fourth and the twenty-first years, while sarcoma occurs in later life. The history of the case and the finding of tubercular foci elsewhere will aid in diagnosis. Tuberclle is more rapid in growth (Andrew).

In any case of solitary mass in the iris antisiphilitic treatment should be instituted. If this fails the mass should be excised by iridectomy and examined microscopically. It may be necessary to enucleate the eye.

There may be cases without tuberculous nodules, but should be regarded as tuberculous, often marked by the presence of large lardaceous looking deposits or masses which appear to grow out from the sinus of the chamber. You may see very minute grayish nodules with the higher powers of the corneal microscope.

CHOROID PROBLEM IN DIAGNOSIS

Tuberculous lesions of the choroid, viewed by the direct method, are not so contrastive. Light fawn colored objects, they gradually merge into the red reflex, covering them is a stipple of final retinal pigment granules (Stephenson). Tuberclles resemble the spots seen in disseminated choroiditis when multiple, the common number is two or three. The tubercles in this form of the disease appear a few days or weeks before death: hence, they cannot be mistaken for the elevations of disseminated choroiditis. They begin in the deeper layers of the choroid, growing from the adventitia of the vessels. They do not affect the vision. In many cases they can be demonstrated by microscopic section in the eyes which present no changes to the ophthalmoscope. In probably 80 per cent of cases of military tuberculosis their presence can be demonstrated post mortem. According to Carpenter and Stephenson, they are found ophthalmoscopically in 50 per cent of cases of miliary tuberculosis, and tuberculous meningitis

and in 10 per cent of cases of chronic (surgical) tuberculosis. The presence of tubercle bacilli cannot always be demonstrated in the cases. The larger tubercles show giant cells with a reticulum of fibres, epithelioid cells, small cell infiltration and caseation.

The smaller growths are collections of lymphoid cells situated between the vessels.

RETINA

Tuberculosis of the retina probably is of more frequent occurrence than would be indicated by the fact that less than forty cases are on record. The earliest ophthalmological signs concern the retinal vessels, and more often a vein than an artery is involved (Jackson). The earlier accounts dealt chiefly with large tuberculous masses or tuberculomas, diagnosis being made after removal of eye for intra ocular tumor. Spencer states that hemorrhage with or without reduction in vision (depending on part of retina involved) often is the first evidence of retinal tuberculosis. They are usually multiple pin point in size or massive, often in young adults being the only evidence of tuberculosis.

According to Jackson, the first visible changes are often found in the periphery of the fundus, and in some cases are preceded by tuberculous lesions of the anterior segment of the eye.

If recognized in an early stage, rounded masses of whitish exudate are seen in the retina or in the vitreous humor near the retina. These masses are associated with the retinal vessels, most frequently the veins, varying in diameter from 1/10 to that of the optic disc, the vessel on both sides of the mass appearing normal. Later the vessel involved, or a limited part of it, may become widely dilated, and the masses may become quite pink or red with new formed vessels. During this stage hemorrhages occur, may be small and flame shaped or massive, breaking into the vitreous and causing blindness. Hemorrhages, whether small or large, slowly undergo absorption, clearing up in course of weeks or months, the larger ones often leaving vitreous opacities and retinitis proliferans. They have a tendency to recur.

SCLERA TUBERCULOSIS COMMON

Tuberculosis of the sclera is more common than it is thought to be, appearing as more or less definite nodules, later as heal occurs it assumes more of the diffuse form. The nodules of scleritis hardly merit the

name, since they most often appear simply as elevated areas in the sclera. They usually reach a considerable size and are situated at some distance from the cornea, most often, perhaps, where the anterior perforating vessels enter the globe. Sometimes there are also small nodules which are situated beneath the conjunctiva and form the centers of small congested areas, varying in size from one to several millimeters in size. They sometimes occur near the limbus simulating phlyctenules. They have a tendency to disappear and reappear within a short period of time.

These nodules have been examined by Verhoeff, and showed that the essential lesion was a focal proliferation of endothelial cells, among which an occasional giant cell occurred, surrounded by an infiltration of lymphoid and plasma cells.

The vessels in the neighborhood showed perivascular infiltration with chronic inflammatory cells and the subepithelial tissue showed a similar infiltration in a greater or less degree.

Caseation was entirely absent. These cases generally accompanied a keratitis, characterized by a deep infiltration of the cornea usually, but not always, extending out from the sclera on the affected side, which showed one or more punctate areas of greater density. The variation in the density of the diffuse infiltration was always more apparent than in that of the punctate areas.

The scleritis generally clears up before the keratitis. New vessels were slow to make their way into the cornea, and the vascularization was always insignificant when compared to the density of the opacity or to the amount of inflammatory reaction.

These cases are found most often in females, average age about 25, and are aggravated during the menstrual period. Similar cases of scleritis have been reported by Wagner, Von Hippel, Czermaks and Sattler's discussion of Von Hippel's paper, Vassius and Fuchs in his text book.

OPTIC NERVE INVOLVEMENT

We may have an optic neuritis as a result of tuberculous meningitis or the result of a general tuberculosis.

In rare cases a conglobate tubercle occupies the disc, transforming it into a white, shining, smooth or nodular tumor which is considerably larger than the normal disc and projects far into vitreous; small white foci may be present in the ad-

joining retina. Sight is comparatively good and improves under tuberculin treatment which also causes subsidence of the swelling until nothing is left but a thin connective tissue layer (Salzman).

TREATMENT WITH TUBERCULIN

The basis for the use of tuberculin in various forms of tuberculosis, in which we include scrofulosis, rests on three factors. The ocular findings with consideration of the pathologico-anatomic type, general findings, and type of immunity.

If, with Ranke, we consider tuberculosis to be a general disease, involving the whole body and not an individual organ, we must distinguish three characteristic stages of development. The primary tuberculid, to which belong the youthful early forms, tubercle of iris with tubercle formations. The typical secondary forms of the period of hypersensitivity in which the acute inflammation is the most prominent symptom (according to Schiek, periphlebitic process in the retina, diffuse iritis and iridocyclitis, and anaphylactic scrofulous forms), and third, the late forms, especially iris tuberculosis with frequent recurrences and vitreal opacities, where a partial immunity has developed. To these three forms correspond the different actions of tuberculin, normal sensitiveness to the toxin in the first, therefore expecting the best results in this form, in the second hypersensitivity where it is less beneficial and may be deleterious, often foreign protein therapy acting better, and third, in which we have partial immunity, may expect better results.

In general, one should begin with small doses and increase them, that is, begin with 0.001 mg. old tuberculin, increasing slowly up to 1 mg., not going above 5 to 10 mg., if pulmonary tuberculosis is present. After a cure is obtained, patient should be treated with small doses $\frac{1}{2}$ to 1 mg. every two or three weeks.

General hygienic treatment should be given, rest, proper food, sunlight, ultra violet radiations, cod liver oil and Fowler's solution.

SUMMARY

Ocular tuberculosis occurs more frequently than has been suspected.

Tuberculin is of great value in the diagnosis and treatment, but general hygienic measures should not be neglected.

Ocular tuberculosis often occurs without symptoms of tuberculosis elsewhere in the body.

It is especially common in the later stages of acute miliary tuberculosis.

NOTE: This paper was illustrated by lantern slide photomicrographs.

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DISCUSSION BY DR. RALPH H. PINO

After listening to this paper Dr. Poos, I am impressed with the technical importance of it to the ophthalmologists, realizing, however, that much of the detail is of only relative interest to the other members at this Staff Meeting.

First relative to the pathology: we note from this paper that tuberculosis involving the eye can be a process of a single part of the eye such as the cornea, or it can involve the whole of the eye with complete destruction. We note also that there are many cases where there is very evident tuberculosis involvement in the form of a keratitis which responds to treatment very well and apparently gets entirely well. Having in mind that tuberculosis involves any or all tissues of the body and that post-mortem findings reveal a former tubercular involvement in the majority of cases, we arrive at the conclusion that in the vast majority of people that tuberculosis has been present and has healed, spontaneously or with treatment, and with or without the patients ever knowing that they had it.

Since this is the case, I believe that there is something to be learned from the therapeutic findings in tuberculosis of the eye in this respect. Among the most spectacular results in some of the inflammatory conditions of the eye, we find that it obtains in the use of tuberculin, starting with very minute quantities of it, as low as 1/150,000 of a milligramme, when injected intermuscularly, will produce an inflammatory involvement of the eye. Where this is the case, where every other factor

has been ruled out from the standpoint of diagnosis, we often find that the patient responds remarkably and apparently becomes entirely cured of such a lesion by being treated with tuberculin: which raises this question, and it is the one of most importance in a general way, and I think should receive the attention especially of the internists—to the point that possibly there are many cases where treatment by tuberculin would solve some undiagnosed conditions. I would use as an example an arthritis. We know that tuberculosis involves the joints at times. Now, have we not cases where a patient will come in complaining of rheumatism, the etiology of which, we are entirely unable to find? It may involve only one joint and may last for a long time. My suggestion would be that in view of our experience with tuberculin in some of these eye lesions, which are so located that we can see them and watch their progress, that if a patient comes in with an arthritis, in which the etiology cannot be found, that all the tests be made relative to the possibility of trying tuberculin, and if it seems feasible, to try it out, beginning with small doses. Possibly we will find some of these obscure things cleared in this way, and what would apply to an involvement of the joints, might apply to other cases where only a small defect is noted.

RENAL TUBERCULOSIS

W. E. KEANE, M. D.

Mrs. N. P.—Age 44 and white. Married. On entrance she stated she had always been in good health until present illness. Married 24 years, husband living and well, had seven children. Her symptoms were frequency, nocturia, pain in back, with some pain on urination. The illness began about a month and a half ago. At this time she urinated every three hours during the night and about every hour during the day. She noticed a burning sensation upon urination—no Hematuria or Oedema. She had a visceroptosis and has considerable pain on deep pressure on the right side. She was cystoscoped and the bladder capacity was found to be 225 c.c. The bladder mucosa showed a marked degree of cystitis. The right ureteral orifice was of the golf ball type and the left appeared normal. No. 6 French catheter passed on left side to pelvis of kidney meeting no obstruction, a No. 5 French catheter met an obstruction about 3 inches from the right ureteral orifice. The urine flow from right kidney was constant, and the flow from the left side was slightly below normal. The dye appeared in four minutes on the left and six minutes on the right. After a pyelogram was taken we were under the impression that we were dealing with a hydronephrosis of the right side with possible stone in pelvis or ureter. Repeated tuberculosis tests were negative. She was again cystoscoped one week

later and her intravenous phthalein test was checked again. The appearance time on right side was four minutes and on left four and one-half minutes. The flow from left side was rather slow and intermittent, that from right side appeared to continue to flow as is seen in hydronephrosis.



Right Pyelogram, Renal Tuberculosis

At the end of the ten minute interval bladder drain and no phthalein found in bladder. A right pyelogram was made after 25 c.c. of opaque fluid was injected into the right side without giving any discomfort.

N. P.—A Nephrectomy was done and the kidney which showed definite evidence of hydronephrosis with tuberculous abscesses in several of the kidney calices.

Mrs. M. M.—Aged 33 and white. This patient gave no history of operation, serious illness or injury. Two years ago, she said she had bleeding from the bladder which lasted but one day. The last symptom of bleeding she said began February 23rd.

Cystoscopic examination done at this time showed a bladder of average size. The right ureter was slightly enlarged and an area of congestion surrounded the right orifice that bled easily, from granulation. Catheters were introduced on both sides full length and no obstruction was met with. The drip from the left side was observed to be about twice the normal amount and was clear. The appearance of the left ureteral orifice was entirely normal and the observation was made at this time because of the findings, that tuberculosis of the right kidney should be ruled out by further study. One week later catheters were again introduced, and the urine again taken from the left side, which was found to be entirely normal and free from tubercle bacilli.

The urine from right side was scanty and of a

cloudy watery appearance. The dye appeared in 5 minutes on the left and in 25 minutes on the right side. Microscopic analysis showed tubercle bacilli in large numbers from right side. A pyelogram was made of right kidney and the findings confirmed tuberculosis. A nephrectomy was done with prompt improvement of all symptoms.

Pathological section was made of right kidney which showed a typical tuberculous kidney.

Alfred S.—Aged 30 years. Patient was first seen on April 4, 1927.

Patient had been under care for a considerable time for the relief of frequency and burning on urination.

Past History—Patient had G. C. in 1917, while in the army. Had a "sore" and a small abscess on the foreskin at the same time. Repeated blood Wassermanns were negative.

Present History—Has had "neuritis" for the past two years. Several teeth were removed after X-ray examination. Has pain in the left hip and lumbar region and leg.

Symptoms of frequency and burning of urination and backache.

Observation—Lost 14 pounds in the last year. Wassermann negative. Both first and second tubes of urine are slightly clouded and contain pus. Prostate is small in both lobes and there are no nodulations. Vesicle not palpable. Testicles and epididymis show no pathology.

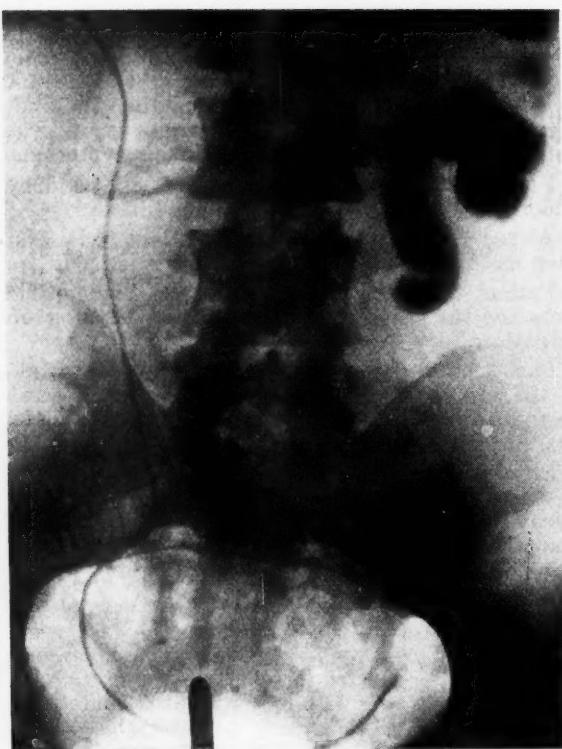
Cystoscopic examination April 12, 1927. This demonstrated the bladder to be of average size with moderate trabeculations, right ureter easily found and entered full length with a No. 6 catheter. Gross appearance of the urine from this time was normal. In the region of the left



Pyelogram, Renal Tuberculosis

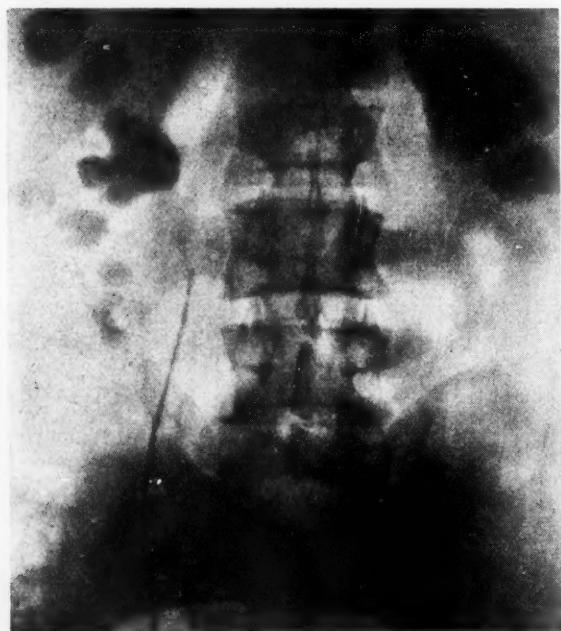
ureteral orifice there is a semi-solid growth which was not suggestive of a malignancy but should be rechecked and the left kidney catheterized, as it was impossible at this examination to introduce any type of catheter into the left ureteral orifice.

Patient's bladder again examined May 8, 1927.



Left Pyelogram, Hydronephrosis which proved to be Tuberculosis.

At this time the growth previously noted in the left ureteral orifice, was examined and apparently was unchanged. Attempts were unsuccessful to introduce a catheter into the left side, and patient was again seen on the following June 10, 1927, at which time both specimens of urine were fairly clear. On September 10, 1927, a cystoscopy was again done with the injection of Indigocarmine dye, and, while the appearance time on the right side was about four minutes,



Bilateral Renal Calculi—Left Pyelogram, Questionable Renal Tuberculosis.

there was no dye appearance from the left kidney after thirty minutes.

Patient was admitted to Receiving hospital in December 1927, and a catheter was introduced into the left side, by Dr. Ames. After 30 c.c. of sodium iodid was introduced, a pyelogram was taken. One week later a pyelogram was done on the right side, which appeared to be normal. A pyelogram of the left side showed a large hydronephrotic kidney, the ureter and several of the calices outlined what suggested a chronic inflammation. A dye test done before the pyelogram was made showed the phthalein appearance time was 7 minutes on the left and four minutes on the right. Repeated specimens had been stained but no tubercle bacilli were found. N. P. N. was normal.

Because of the X-Ray findings, and his continuous pain resulting in the loss of over half time at his work, it was deemed advisable that the kidney should be removed. Accordingly a left nephrectomy was done on January 26, 1928.

Pathological examination showed positive evidence of a tuberculous kidney.

These cases present examples of the ease and difficulty in diagnosis of tuberculosis of the kidney. The diagnosis of renal tuberculosis and the presence of tubercle bacilli in an acid urine, frequent and painful urination pyuria, hematuria, pain in the kidney region, confirming dye test and suggestive pyelograms, is a very easy matter, but all of these symptoms may be lacking and its detection correspondingly difficult.

In the case of male patient A. S.—Cystoscopic examination was done at least six times before we were able to introduce a catheter into the left ureteral orifice—at the first examination the bladder appeared normal, except the region about the left ureteral orifice. There was a granuloma which suggested new growth, and which presented an obstacle in diagnosis that Braasch has called attention to in a recent article on this subject. This granuloma gave the appearance of an epithelioma of the mucous membrane in the area about the left ureter, and was even fulgurated, at one examination, in the hope of aiding entrance on this side.

The pyelogram of this kidney suggested rather hydronephrosis than tuberculosis. But we are finding, with more careful study, that many times these two conditions exist simultaneously. No tubercle bacilli were found notwithstanding the presence of tuberculous infection in this kidney, and hence we did not make a positive diagnosis before operation was done.

The dye test done on this patient at different times showed an appearance time of five minutes on the left side, and this again rather led us away from diagnosing

tuberculosis. Wildbolz, Marion and Lagueu stress the diagnostic value of kidney function with early as well as late renal tuberculosis. Wildbolz does not consider a few white blood cells pathognomonic of renal tuberculosis unless associated with diminished function. However, there are numerous cases reported with normal or even slightly increased function in the face of renal tuberculosis.

We believe that sacral anesthesia is a definite aid in doing cystoscopy and introducing ureteral catheters in patients with tuberculosis of the urinary tract. We believe that in this patient our success in entering the left ureter after several failures was due to the use of sacral anesthesia. We would recommend it for use in similar cases.

Improved X-ray apparatus has increased its value tremendously and we are able to find confirming evidence with many characteristic pyelograms. Calcification forming shadows is usually a late process but pyelograms may mean a distinct help when tubercle bacilli are not found in the urine.

We have in these cases presented the moth-eaten appearance of the pelvis and calices and an irregularity in outline.

We also have an example of dilatation of the pelvis and ureter as result of stricture. We also call attention to one case with the so-called "putty-like" masses and which generally suggest renal tuberculosis.

Two slides are also presented of a patient 35 years old who shows with X-ray and pyelogram two massive kidney shadows with large number of calculi and definite evidence of hydronephrosis. This patient is still under observation and because of the bilateral involvement we are in no hurry to attempt a radical treatment. He works every day and his only complaint is a slight back-ache and that he tires late in the afternoon. No tubercle bacilli has been found, but we feel rather inclined to suspect a tuberculosis may complicate this bilateral involvement.

DISCUSSION ON PAPER OF DR.

WM. E. KEANE,

R. E. CUMMING, M. D.

The diagnosis of renal tuberculosis still constitutes one of our biggest urological problems. Dr. Keane has amply illustrated this by his series of case histories and pyelograms; even after extensive investi-

gations including six cystoscopic examinations, in one instance, the diagnosis could not be made. Adversely, the kidney, known diseased, appeared tuberculous at operation and on section disclosed a most typical picture of advanced tuberculous pyonephrosis. The associated hydronephrosis is rather rare as I have previously indicated in an extensive study, but with the combined lesion, one expects to find the invading organism more readily, due to free access to the pelvis and good drainage. In Dr. Keane's case, the pelvis was drained only once suggesting a possible explanation of the failure to find tubercle bacilli. Another explanation in this type of case is secondary infection, overshadowing the tuberculous and more chronic involvement.

In contrast to such advanced disease as that in the kidney described, Dr. Keane showed pyelograms of two cases, which he considered typical of tuberculosis; in each case tubercle bacilli had been found and with a clear diagnosis the indication for nephrectomy was obvious. I cannot agree that the films were typical of tuberculosis; they proved pathology, but were no more indicative of an acid-fast infection than of some other type. The X-ray findings may be normal with renal changes and specific bacilluria: they may show complete calcification shadows; the variation between is wide and there is no typical set of renal pelvic changes that are positively diagnostic.

Our renal function tests also are difficult to interpret in renal tuberculosis; not only is this true because of the frequency of secondary infection, but also because of the tendency to localization of the lesion, a large area of functioning tissue remaining. Therefore wide variations in dye percentage are found and no rules of guidance are possible.

Finally, a word relative to laboratory tests; it is still considered likely that tubercle bacilli are filtered through the kidney as are other bacteria. Again, other bacteria obscure the suspected type in mixed infections, and lastly, due to lesions remote from the pelvis, there may be no passage downward of the organisms, or only occasional "showers." The present-day animal inoculation test is notoriously inaccurate and where positive, has often been preceded by a diagnosis with other means and operative attack. We have been conducting experiments of our own and repeating those of others over a period of seven years in an attempt to arrive at some method for quick and accurate

animal tests, and are hopeful of establishing such a procedure in the future.

PULMONARY TUBERCULOSIS

DOUGLAS DONALD, M.D.

Case Report—A. F.—Female, age 31, white.

Comes in complaining of a cough for the past two months. Anorexia. Coughed up a pint of blood. Onset November 10, 1927 at which time she was in a run-down condition because of household cares. At this time she developed a cold persisting to the present time, and accompanied by sputum. December 24, 1927 she coughed up a small clot of blood in a handkerchief. Has become weaker and lost nine pounds in weight. Denies night sweats. December 27, 1927, she coughed up a pint of bright red blood which was diagnosed by her physician as being caused by an abscessed tooth. January 13, 1928, had another hemorrhage, which time she claims to have coughed up a quart of blood. Hoarse since onset losing her voice completely at times. Denies any evidence of tuberculosis in her husband, children or family. Amenorrhea since October 4th.

On physical examination sallow appearance, marked hoarseness, mucous membranes pale. Poorly developed with evidence of recent loss of weight. Poorly nourished, skin dry and somewhat scaly. Cervical glands palpable with a somewhat matted percussion of left apex ant. and post. Tactile fremitus somewhat increased. Crepitant and moist rales over the left apex. Voice sounds increased. Breathing of the tubular type at level of second inner space ant. Evidence of a cavity second inner space ant. Laryngoscopic examination shows edema of the arytenoid. No ulceration. Sluggish movement of cords. Impression:—Early tuberculosis of larynx.

X-Ray, January 14, 1928—Infiltration of the entire left lung with cavity at left apex. Marked retraction of heart to the left, due to a productive type of lesion. Urine negative. Blood—R.B.C—3,800,000. W.B.C—5,800. Polys—78%. Lympho.—21%. Wassermann and Kahn negative. Sputum was positive on five occasions with many bacilli.

Temperature shows afternoon rise varying between 103 and 98 with the pulse in proportion to the temperature varying between 74 and 120. Respirations 20. Blood pressure 118/60.

This patient presents the picture of advanced pulmonary tuberculosis with early laryngeal involvement, and from the point of view of diagnosis presents no difficulty. There is a history of cough, loss of weight and three attacks of hemoptysis, one of which you will note was stated by a doctor to be due to an abscessed tooth. Such a diagnosis as this should help us remember the old aphorism that all hemoptysis must be considered as due to tuberculosis until proven otherwise. To dismiss this case of hemorrhage as being due to an abscessed tooth was nothing short of criminal. The physical findings and X-ray confirm the impression we must get from the history. There is evidence of advanced

tuberculosis in the left lung with cavity formation, and beginning changes on the right side. There is oedema of the arytenoid, there is a hectic type of temperature and a secondary anemia. The sputum contains many tubercle bacilli. Unfortunately, such cases as this are seen frequently in the Receiving hospital and their stay here, as a rule, is far too long for their good. We average about 16 tuberculosis patients on the wards and have had as many as 30 at a time. They stay for months. The reason for this is, of course, the congested condition of the State and City sanitaria. I do not say County sanitaria, because Wayne county has no tuberculous sanitarium. A general hospital of this kind is in no way fitted to provide the proper environment for rest, fresh air, nor the proper diet. Many of these patients, were the home conditions proper, would do better at home, and this leads me to the feeling that in our private practice we are far too liable, once the diagnosis of tuberculosis has been made, to make arrangement for sanitarium care and not give the patient proper attention while at home. Many of these patients do not need sanitarium care, and, in fact, will do better under home surroundings granted that the home conditions are proper. Of course, if there are young children under five about the house, the sanitarium care is indicated, in order to protect the children. Even if it is decided that a stay in a sanitarium is advisable, much valuable time for the patient may be gained by instituting proper home treatment before admission to the sanitarium.

CONTRIBUTION OF RADIOLOGIST

J. C. KENNING, M. D.

As I am only allowed a few minutes for this discussion in regard to radiographic examination of the chest in adults, I do not think it necessary to say anything regarding the relative value of the examination, as its value as a diagnostic factor is well established at this time. It might be well, first, to state that the pulmonary markings are due to the fluid content of the artery, vein, and lymph channel, and their structure plus that of the bronchus. These markings are apparent in the radiograph and extend slightly beyond the mid-clavicular line of the chest in a plate we consider to be normal. The illumination is in direct proportion to the air content of the lung, and these are the two basic factors of the roentgenologic interpreta-

tion. Each case should be fluoroscoped and viewed at all angles. The technique of taking the films will not be touched upon, except to say that it must be a proper one, and the films of constant character obtained with the finest detail possible. Increased markings of both lungs is invariably the result of a cardiac lesion.

Incipient tuberculosis in a radiograph is first shown by several small irregular shadows with a hazy border in the peripheral portion of the lung field, usually in the second or third interspace. This plate demonstrates what we consider to be an early lesion. You are all, no doubt, aware that we divide tuberculosis into the productive and exudative types naming the most predominant lesion, if both are present. Now the area of infiltration must be at least 4 millimeters in diameter to cast a shadow on the radiograph, and it is our experience that when tuberculosis produces clinical symptoms we are usually able to demonstrate it in a film of the chest.

This film which I am showing you is one of an exudative process in the upper right lobe. You notice the opacity is homogeneous, which is really a pneumonic process, but tubercular in character with small areas of infiltration extending to the apex.

On the other hand, here is a film showing a typical productive type of lesion and has a marked fibrous tissue production. The tubercles themselves may be surrounded by fibrous tissue in a productive lesion and, of course, the prognosis is always better in this type. We will now show you a film of the exudative type of tuberculosis involving the middle right lobe and part of the lower right with cavity formation, but the apices are uninvolved.

Next I wish to show you a case in which you will notice there is a marked enlargement of the entire cardiac shadow, and with the fluoroscope the pulsations are hardly discernible. You will notice the infiltration throughout both lungs, it being slightly increased in the second and third right interspace. This was miliary tuberculosis even though there was apparently a marked cardiac enlargement. The clinician reported the heart sounds distant, and suspected pericardial effusion, but we consider the cardiac enlargement to be due to a marked thickening of the pericardium, and not to a pericarditis with effusion, principally on account of the practically absent pulsations, distant heart sounds, and no valvular disease. Serial radio-

graphs showed a marked progress of the miliary process involving both lungs, and at autopsy our above conclusions were found to be correct.

I feel that the roentgenologist should be the clinician's consultant, as all of you realize the extreme difficulty in the interpretation of films of the chest. No matter how sure you feel of your roentgen diagnosis, there should be a correlation of the history, clinical and physical findings, and the radiographic interpretation. I wish to say here that we have ward rounds with the clinicians on the medical service; the clinician presenting his side of the case, and we the X-ray findings. This procedure has been of much value to me and I hope, also, to the clinician.

TUBERCULOSIS LESIONS

OSBORNE A. BRINES, M.D.

Pathologist, City of Detroit Receiving Hospital

As a rule we are not greatly interested in statistical data, but when they are collected in our own hospital on material that has passed before our eyes, they become intensely interesting. The following figures have been derived from an analysis of the last 500 autopsies at this hospital: 135 cases, or 27 per cent showed frank active tuberculosis. Routine autopsy technique only was employed and no special effort was made to detect tuberculosis. Many cases with small healed tubercles in lung tissue were not included.

Only in 4 cases, or 3 per cent, was there no pulmonary tuberculous lesion: in one of these 4 cases the liver was involved, in another only the mesenteric lymph glands and in still another there was tuberculous meningitis with no other demonstrable acid fast infection. In the fourth case both spleen and liver contained tubercles, but other organs, as far as could be ascertained, were free.

The 131 cases showing lung tuberculosis were subdivided into 2 groups: major and minor; the major being those cases where tuberculosis was the predominating pathology and the minor where the principal pathology was another type of lesion. There were 102 major and 29 minor cases of pulmonary tuberculosis.

In the 102 major cases of lung tuberculosis the following organs or structures were involved as below shown: Liver in 50 cases; spleen in 46 cases; kidneys in 28 cases; peritoneum in 17 cases; intestines in 12 cases; adrenals in 10 cases; brain in

7 cases; genito-urinary tract in 5 cases; pericardium, 3 cases; appendix, 3 cases.

The following figures illustrate the multiplicity of organs involved in these 102 pulmonary cases (lymph glands, skin and bones not included): 7 organs in 7 cases; 5 organs in 10 cases; 4 organs in 12 cases; 3 organs in 29 cases; 2 organs in 23 cases.

In only 21 of the 102 cases was pulmonary tuberculosis the only demonstrable tuberculous lesion.

In the 28 cases of tuberculous infection of the kidneys in these 500 autopsies other organs were affected as follows: 5 other organs in 4 cases; 4 other organs in 8 cases; 3 other organs in 9 cases; 2 other organs in 5 cases; 1 other organ in 2 cases.

In no case was the kidney the only organ involved.

In all cases of tuberculous nephritis there was associated pulmonary tuberculosis.

Such a review prompts us to ask ourselves: How many physicians, in diagnosing or treating pulmonary tuberculosis, where this constitutes the major disease, realize or consider that nearly half of the patients with this disease have also tuberculosis of the liver, that nearly half have tuberculosis of the spleen, nearly a third have tuberculous nephritis; that 68 per cent have from three to six organs involved; that in only one-fifth of the cases is the disease confined to the chest alone? How many surgeons, in removing a tuberculous kidney, really appreciate the fact that tuberculous nephritis practically always involves other organs; that there is practically always an accompanying pulmonary tuberculosis; that in 75 per cent of the cases of renal tuberculosis from three to five other organs are involved?

A consideration of these facts makes it easier for us to believe that tuberculosis is primarily a disease of lymphoid tissue; that lymphoid tissue constitutes first choice for the organism; that by the blood stream mainly the bacteria are generally distributed, exposing all organs which possess a variation in susceptibility ranging from lung tissue which is second, to the pancreas which is probably last. In acute miliary tuberculosis old lymph gland involvement can usually be found. However, experiments have been performed in which tubercle bacilli introduced into the rectum were found in the peribronchial lymph glands within a few days.

Toxic degeneration of the liver is a factor not to be underestimated in tubercu-

lous infections. This great detoxifying organ of the body suffers degeneration many times as a result of exposure to various bacterial and chemical poisons, but those elaborated by the tubercle bacillus, or as a result of tissue destruction in tuberculous infections, is of major importance. In over three-fourths of the cases of pulmonary tuberculosis in this series of post-mortems there was either tuberculous hepatitis or toxic degeneration of the liver. In the previous series of 300 autopsies, of which 73 showed moderate or extensive toxic degeneration of the liver, the major pathology in 23, or about one-third, was tuberculosis, all cases showing pulmonary involvement. In 13 cases, or 19 per cent, the liver degeneration itself was the major pathology being idiopathic or primary and included four cases of acute yellow atrophy. Pneumonia came next with 12 cases.

SURGERY OF TUBERCULOUS CONDITIONS

Dr. A. H. Whittaker presented a discussion of the surgical aspects of tuberculosis and demonstrated the methods followed in various European clinics, by means of moving pictures, which were taken during 1927.

The first pictures demonstrated the treatment of tuberculosis of the joints by heliotherapy in the clinics of Oslo, Norway. Extensive equipment of carbon-arc lights, to which patients are exposed daily, was shown; also pictures of Dr. Bull, Professor of Surgery in the University of Oslo. It was explained that Dr. Bull had had a very extensive experience with thoracic surgery during the last fifteen years. His chest surgery is done under gas anesthesia, in thoracoplasties, the rib removal being extensive and done in two and occasionally three stages.

Surgical tuberculosis in Denmark was shown by views of the Finsen Institute, which (since Finsen's death), has been a governmental institute. A large number of cases of lupus vulgaris are sent here from all over the kingdom. The patients examined at the institute, usually showed involvement of the face, particularly the nose, with extensive destruction of the tissue. These cases, in addition to careful dietary measures, receive daily exposure to the large water-cooled Finsen lights. Pictures of these lights were shown, seven or eight patients grouped on stretchers around each light. The carbon-arc lights

were also shown in use, as in Denmark very few of the Mercury burners are used to generate ultra-violet.

At the University of Hamburg, Professor Brauer was shown talking at the Deutsche Forshungsanstalt Fur Tuberkulose of the influence of artificial inactivity (Ruhigstellung) and collapse of diseased lungs in pulmonary tuberculosis of the kidneys, in which, he stated that in an extensive experience in surgery of the kidney and in the autopsy room and in the laboratory, he had never seen tuberculosis of the kidney recover spontaneously, and as the other kidney always becomes secondarily infected, he advised immediate removal of the kidney as soon as diagnosis is established.

Views were then shown of the large medical department of the University of Leipsic. Several operations were shown of the clinic of Dr. Payer, Professor of Surgery. There was an arthroplasty of the elbow to correct an old tuberculous process; an amputation of the leg and a spleenectomy.

SKIN TUBERCULOSIS

GEORGE VAN RHEE, M.D.

(Associate Attending Dermatologist)

J. L.—Age 33, female, born in Finland, at eleven years of age developed a red patch on the tip of the nose. Shortly after the onset she was



taken to the hospital where the tip of the nose was amputated. She emigrated to this country when twelve years of age. At fourteen years of age the disease appeared on the left cheek grad-

ually increasing in size. Two years later she was treated at the University of Michigan hospital for six months. She stated there was some improvement. Following this she had an artificial nose made in Chicago. In 1918 she came to Harper hospital with erythematous patches on both cheeks extended on to the bridge of nose. The cartilaginous portion of the nose was gone. The skin was thickened and scarred. She was treated for about three years with a Quartz light with very good results. She then went to Grand Rapids where Dr. Ferris Smith constructed a new nose. There was no recurrence for four years. Two years ago the disease appeared on left cheek and nose. The condition gradually spread over entire cheek and nose. October 1927 she came to Receiving hospital with a very marked involvement of left cheek, nose and small patch on right cheek. She has been treated with biweekly applications of Kromayer lamp and injections of Gold sodium thiosulphate.

The types of tuberculosis of the skin due to the direct infection with the tubercle bacillus are lupus vulgaris, tuberculosis verrucosa cutis, acute tuberculous ulcer and scrofuloderma. In this discussion we will consider one of them, lupus vulgaris.

This disease is more common in Europe than in America. In a survey by the American Dermatological Association it comprised about 25 per cent of all dermatoses.

The exciting cause of the disease is the tubercle bacillus which enters the skin from without. It is still unsettled whether the human or bovine type is responsible. The young are most frequently affected, it being rare to find a case beginning in a person after thirty years of age. Although Crocker reports two cases at sixty-three and one at forty-six. Lupus vulgaris may occur in persons of good health, but it is usually seen in those who are below standard. Bad hygiene, overcrowding, filth, presence of tuberculosis in other members of the family, are predisposing causes. Some cases are due to a direct external inoculation, as following trauma, after circumcision, after tattooing and rarely following vaccinations.

MUCOUS MEMBRANES INVOLVED

Lupus vulgaris can involve the mucous membranes as well as the cutaneous surfaces. The face, especially the nose, cheeks and ears, are most frequently involved. In our case the disease began on the nose. All of the mucous surfaces of the nose, mouth and the genitals may be affected. In a statistical study of 374 cases, Bender found the face involved in over 75 per cent and Forchammer found the mucous membranes involved in 72 per cent.

The disease begins with the formation

of small miliary tubercles in the upper portion of the corium. To the naked eye, they appear as small brownish, slightly infiltrated nodules. Under a glass slide the individual tubercles can be seen as the characteristic "apple jelly nodules". The lesions spread from the periphery and form patches. These patches may remain unchanged for months until finally the older lesions undergo necrosis and form shallow ulcers with overhanging edges, red base, frequently covered with a brown crust. They heal, forming soft, smooth or keloidal scars. In some cases, there is a large amount of destruction and distortion such as ectropion, narrowing and loss of nasal orifices and loss of fingers.

The pathology of lupus vulgaris is similar to tuberculosis elsewhere in the body.

MISTAKEN FOR LUPUS

Syphilis and carcinomata are frequently mistaken for lupus. Syphilis is not common at an early age. It spreads more rapidly than lupus and forms sharply defined punched out ulcers. The Wassermann reaction, the therapeutic test and, if necessary, a biopsy should establish a diagnosis.

Cancer very seldom appears before the age of forty. In cancer, the edges are hard, elevated, and here again the removal of tissue will establish a diagnosis. Carcinoma can occur on an old lupus scar.

Lupus vulgaris is a very chronic disease and rebellious to treatment. The general management is the same as for any other form of tuberculosis. The patient should receive plenty of fresh air, nourishing food and avoid undue fatigue.

Tuberculin has been used in small doses and is of doubtful value. It is contraindicated in cases associated with acute pulmonary tuberculosis.

Local treatment is important. Of the various physical agents the Finsen light and Quartz light head the list. Small lesions can be very successfully removed by electrodesiccation or carbon dioxide snow. We used the Kromayer light and injections of Gold sodium thiosulphate. It is too early to derive any conclusions in regard to the efficiency of Gold sodium thiosulphate.

DR. GEORGE W. JONES HONORED

A complimentary dinner was tendered Dr. George W. Jones of Imlay City, February 18th by his son Dr. Morrell M. Jones of Detroit. This was one of the most pleasant medical social events within recent years. The dinner was served in the club rooms of the Wayne County

Medical Society. Dr. G. VanAmber Brown acted as toastmaster and in a brief, well worded address, referred to the occasion of the meeting to do honor to one whose whole life had redounded with honor to the medical profession of Michigan. Dr. Jones is probably the oldest physician in active practice in the State of Michigan. Toasts were responded to by Doctors H. E. Randall, president



Dr. George W. Jones.

(Honorary Member of the Michigan State Medical Society.)
Imlay City, Mich.

of the Michigan State Medical Society, J. L. Chester, J. G. Campbell of Brown City, Mich., L. J. Hirschman, J. H. Andries, M. C. Jones, Youngstown, Ohio, Morrell Jones and by Dr. William Kay, Lapeer, Mich. Dr. Jones was presented with a beautiful gold watch.

The invited guests in addition to those who responded to toasts were: Doctors Bruce Campbell, P. E. Martin, Imlay City; N. M. Allen, Max Ballin, Angus McLean, W. D. Barrett, W. R. Clinton, R. Peterson, Ann Arbor; H. Haynes, University Hospital, Ann Arbor; T. H. Best, James Marshall, O. Hastings, Reilly; Fred Thompson, William Hackett, George Baker, F. J. Roberts, R. L. Schaeffer, H. L. Clark, S. E. Sanderson, J. H. Dempster, Emil Amberg, E. J. Watson, N. E. Aronstam, Bruce Anderson, Curtis, T. F. Keating, George Kamperman, Fred Cole, L. J. Gariepy, C. D. Brooks and William Woodworth.

Dr. Jones made the following address which is of such general interest to the profession of the state that we herewith present it in full.

OFFERS NO LIFE ELIXIR

Mr. Chairman and Fellow Physicians:
I feel myself unworthy of the honor accorded

me on this occasion. I have, during my whole professional life, tried to avoid publicity of all kinds, and I assure you that this meeting was not sought by me. It was staged without my knowledge or consent.

However, I am here, and it is a great pleasure to be surrounded by so many prominent members of the medical profession. I recall that a strange fatality often follows occasions of this character. I am reminded that Doctors Carstens, Walker and McGraw, of your city, passed away soon after banquets were held in their honor. I trust this will not be my fate.

With your permission, I will relate a few incidents of my life. I was the son of Rev. George and Laura Jones, an M. E. Minister of Ontario. I was born at Orona, County of Durham, Ontario, February 11, 1839. It is true that I have been in the harness for a good many years; but it is my privilege to be old in years, but young in spirit. There are thousands of men who grow old before their time. With idleness, they become restless, discontented and unhappy. Such a life results in physical and mental decay. I have no elixir of life to offer. Keeping in touch with professional current events, and abreast of the times, conjoined with correct habits of life, are important factors in delaying old age, and alleviating the effects of senility. In my younger days, the more I worked the more I wanted to work and the more I worked the more I enjoyed my work. Work is a great safety valve—it keeps us out of mischief and promotes our happiness.

I received a common and grammar school education and on November 6, 1854, began the study of medicine with Dr. E. G. Dorland of Belleville, Ont. I remained with the doctor for one year, and on November 1, 1855, I made my way to Toronto, on the top of an old-fashioned stagecoach, as there were no railroads at that time (the Grand Trunk was building, but no trains were running) at Toronto. I matriculated with the Medical Department of Victoria College, better known at that time as Dr. Rolph's School of Medicine, where I remained until the close of the session, in the spring of 1856.

On November 1, 1856, I returned to Victoria College intending to continue my studies there, but owing to a disorganization of the faculty, I became dissatisfied and left for Buffalo, N. Y., where I entered the University of Buffalo Medical College and remained until the close of the session in the spring of 1857.

I returned to Buffalo in the fall of 1857 and on February 24, 1858, I graduated, receiving the Degree of M. D.

On the 7th of July, 1858, I went before the Ontario Provincial Medical Board and passed my examination for a Provincial license, which gave me permission to practice in any part of Ontario. I began the practice of my profession early in 1859 at Prince Albert and Port Perry, Ontario, where I remained until December, 1870, when I was succeeded by my brother, Dr. Richard Jones, now deceased; and I removed to Imlay City, Mich., where I have since resided.

GRADUATE WORK IN 1860

In 1860 I took a post graduate course in New York City and again in 1862 spent four months more there. I was a charter member of the Lapeer County Medical Society, and served as president for two years, succeeding the late Dr. Hugh McColl. On August 18, 1916, I was made

an honorary member of the Michigan State Medical Society.

During my long residence in Imlay City I have witnessed many and marvelous changes in the village and its surroundings. In 1870 it was a small, insignificant hamlet of less than 100 inhabitants. There were no churches and no school house. Many of the streets contained the stumps of forest trees. The roads in every direction were in bad condition, and almost impassable. I made many of my professional calls in the country on horse-back. To illustrate some of the hardships I endured in my early practice I will mention one of many similar ones. On a dark, rainy night in November, I received an urgent call to attend a man in the Lynn swamp some eight miles distant, who was reported to be bleeding to death from a severe wound in his leg. I mounted my horse, which by the way was a thoroughbred saddle-horse, which I had brought from Canada, and hastened to his bedside. The marsh was in such a condition that I was obliged to hoof it for more than a mile, tying my horse to a tree on dry land until I returned. When I reached the man's abode I found he had bled profusely with his leg corded tightly by twine. He was all alone in his shack. I found he had severed a large artery of the leg and so without any assistance and in the dim light of an old dirty lantern I ligated the artery, which arrested the hemorrhage. I then made my way to my faithful horse and returned home at 12:30 o'clock, tired and sleepy. For this trip my bill is unpaid to this day. I could recite scores of similar cases, but I forbear. Our highways and streets rapidly improved and today our main streets and important roads are all paved.

FIRST DOCTOR IN IMLAY CITY

I was the first physician to settle in Imlay City, coming there December 23, 1870. During my long residence I have been actively identified with its interests and filled various positions of trust and responsibility, such as a member of the school board for many years, postmaster for 12 years under four different administrations; president of Imlay City several terms; promoter and founder of Imlay City Fair Association and its president for seven years; local surgeon for Grand Trunk Railway for near 30 years; member of Lapeer County Pension Board and chairman for 52 years of Congressional Board of Trustees. I have voted at each village, township, state and national election since I became a naturalized citizen.

I was made a Master Mason by Mt. Zion Lodge, Brooklin, Ont., August 20, 1866. My record is that of the oldest living member of Imlay City Lodge No. 341.

In my early practice obstetrical cases were \$5 each and one free visit afterwards; the fee gradually increased to \$8 and \$10. In a review of my obstetrical cases I find 1,700 to my credit. I carried my dental instruments with me on all country calls and extracted teeth at 25 cents per tooth. I kept a good supply of leeches on hand and often used them for local bleeding. I also resorted to wet and dry cupping quite frequently. I used for many years a sacrificator, which, by touching a spring, made 10 incisions, to be followed by suction with cups. Bleeding was practiced quite generally for inflammatory diseases, especially for pneumonia, and pleurisy. Emetics were very commonly used at the beginning of many diseases,

followed by blue pill, senna and salts. Tartar emetic in nauseating doses was extensively used in croup and as an expectorant, setons and issues for deep seated diseases were often used. Fly-blister were our sheet-anchor in pneumonia and pleurisy. Clinical thermometers were unknown when I began to practice and the stethoscope then in use was an ordinary cylinder made of red cedar wood. This was soon followed by improved makes. A host of new instruments and devices now used were unknown and diseases and new methods of treatment have since been discovered. Appendicitis, as a distinct disease, was unrecognized, such cases were diagnosed as "inflammation of the bowels," and nearly all died. The function of the ductless glands and their derivatives were not dreamed of, while vaccines and serums were not yet discovered. While I think many of the devices and methods of treatment have been overestimated, no one can question the fact that great advances have been made along surgical lines as well as in the treatment of diseases.

Since the sad death of my beloved companion, February 13, 1914, I have lived in my old home-stead with my daughter, Mrs. G. F. Butler, who has done everything in her power for my comfort and happiness.

In a review of my past life I have great reason to be thankful to my Heavenly Father for my longevity and freedom from all diseases. I have always been a total abstainer from all intoxicating liquors, and actively interested in the cause of temperance. For 15 years I smoked moderately, but finding tobacco was having an injurious effect upon my heart, I decided to discontinue its use, over 20 years ago, and to this fact I firmly believe my life has been prolonged beyond that attained by the majority of mankind.

VALUED LESSONS

My experience has taught me a few valuable lessons. In the first place, I would advise all young physicians, especially, not to engage actively in party political affairs; there is nothing to be gained thereby, except worry and vexation of spirit. It is very true I have been very well rewarded for my political activities, but what I have gained thereby has been lost by the neglect of my medical practice.

In the second place, I would advise against farming and fast horses. From my youth I have been a great lover of horses and for many years I engaged actively in breeding standard-bred driving horses, but with the advent of the automobile the horse business became unprofitable and I sustained heavy losses thereby.

And I would advise against investing in all "get-rich-quick" schemes—most physicians are "easy marks"—they bite at everything presented to them. I have had my experience in gold and iron mining and suffered heavy losses.

My advice to all young physicians is to give your undivided attention to your profession, free from all entangling, outside ventures. When you become rich or wish to retire, take up anything that your mature judgment approves of, as a fad or a sideline. I have always thought that a collegiate and classical education should be considered as essential pre-requisite before entering upon the study of medicine. Such studies develop every faculty of the mind and furnish a fitting foundation for his future medical course. I have felt this, as a handicap in my personal experience, and regretted that, owing to my

father's limited means, with a family of 10 children, I was deprived of this great advantage.

Notwithstanding all my losses and disappointments, I can truthfully say, "although age and infirmity overtake me, and I come not within sight of the castle of my dreams, teach me, O Lord, to be thankful for life and for time's oiden memories that are good and sweet, and may the evening twilight find me gentle still"; and when the last summons comes, which will come to us all, may I be able to look back to a life of honor, and in the words of Henry Van Dyke, say:

*"I shall grow old; but never lose life's zest,
Because the road's last turn will be the best."*

NEW VITAMIN NEEDED BY YOUNG TROUT

A new vitamin, designated as "Factor 'H'" by its discoverers, has been added to the list of these mysterious accessory food substances required for normal health and growth in animals. It is found in raw liver, and to a slight extent in dried milk, and so far as is yet known is needed only by young trout. With it they grow normally, without it they die.

The discovery was made by C. M. McCay, F. C. Bing and W. E. Dilley of Cornell University, and will be formally announced in the forthcoming issue of Science. It came as the result of an effort to learn the scientific reason underlying the common practice in fish hatcheries of feeding young trout raw liver. Groups of fingerlings were kept in isolated feeding pools, and supplied with carefully compounded rations. Some of these included various known vitamins and some of them no vitamins at all. One group received a vitamin-free diet with a certain amount of dried milk added. None of the fish got any liver at the start.

One by one all the groups of young fish died, although the ones receiving dried milk along with their food outlived the rest. Finally one group of survivors was allowed to have its normal diet of raw liver. Immediately they "picked up" and began to grow rapidly. The investigators therefore concluded that young trout need, for life and normal growth, something that is found in raw liver and to a less extent in dried milk, but yet is not any known vitamin.—Science Service.

HARVARD SCIENTIST DISSECTS MUMMIES OF OLDEST AMERICANS

Mummies of America's oldest inhabitants have been dissected by Gale E. Wilson, anatomist, of the Harvard Medical School. The mummies belong to the Basket Maker Indians, who lived in the southwest before the time of Christ, 3000 B. C. or possibly much earlier, Mr. Wilson states, in reporting his investigation to the American Naturalist. The bodies, which were found in Arizona, are at least as old as most of the early Egyptian mummies, the anatomist states. Repeated tests have failed to reveal traces of blood in Egyptian mummies, but in the American specimens were found red blood cells, shrunken and dried but perfectly preserved. Unlike the Egyptian mummies, which were prepared by elaborate processes, these bodies were not embalmed at all. They were simply buried, and their preservation is due to the unusual drying qualities of hot sand and warm dry climate.—Science Service.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., Commissioner

SAFER ROADSIDE WATER SUPPLIES

A progressive increase in the percentage of safe roadside drinking water supplies is shown by the report of the 1927 survey. In 1925, when supervision of highway water supplies was first undertaken by the Michigan Department of Health, 63.7 per cent of the sources investigated were found safe. This rose in 1926 to 76.3 per cent, and in 1927 it reached 83.6 per cent. This marked improvement can only be attributed to the program of testing and education carried on throughout the state during that time.

Work in 1927 was conducted in the same general manner as in previous years. The first samples were collected on June 1 and the last samples in the Lower Peninsula August 1st and in the Upper Peninsula August 22nd. Posting was begun on June 23 and completed on August 9 except for a few municipal supplies.

Three men handled the work, traveling by automobile. Two collected the samples and one posted the safe supplies. This covered the routes very successfully and made sure that few, if any, possible drinking sources were overlooked. In addition to collecting the samples of water, the men inspected the surroundings of the well to make sure that there were no obvious sources of contamination.

Safe supplies were marked with a metal "Approved" sign as in previous years, the colors corresponding to the colors of the automobile license plates. The black letters on an orange background of the 1927 plates made such a satisfactory combination that this, or something similar to it, will be adopted permanently. While the individual supply signs are not large enough to attract attention from a moving automobile at a distance, they are quite conspicuous enough to draw attention to the well when a person is near by.

Separate signs for municipal supplies were used for the first time in 1927. They are 9½ inches by 13 inches and read "Public Water Supply APPROVED Michigan Department of Health." These were attached to the posts of the municipal limits signs erected by the Highway Department along state trunk lines. This is a very conspicuous place to put them and the result

has been very satisfactory. Many city officials expressed their appreciation of the efforts of the state in advertising to the public that these supplies were suitable for drinking purposes.

Only the safe supplies were marked, following the experience of previous years. Attempting to place warning signs on unsafe supplies was discontinued after the first year, due to the impossibility of keeping the signs up. Educational efforts have been directed toward persuading the traveling public to drink only at "Approved" supplies.

Detailed report of the 1927 survey shows that 84 days were spent on the work, that 1,212 samples were collected from 1,202 sources, and that a total of 7,190 miles of trunk lines were traveled.

A comparison of the results for the three years that the work has been carried on appears in the following table:

RESULTS FOR THREE YEARS

Year	Miles Covered	Sources	No. Safe	% Safe	No. Unsafe	% Unsafe
1925	1,787	427	272	63.7	155	36.3
1926	5,479	805	619	76.3	186	23.7
1927	7,190	1,196	1,000	83.6	196	16.4

On numerous occasions it was found that a well previously judged unsafe had been repaired so as to produce a satisfactory water or else that the use of the well had been abandoned.

The depth of the well continued to have an important bearing on safety. This is shown for 1927 in the following tabulation:

25 feet or less—		75.5 %
Safe, 123.....		24.5 %
Unsafe, 40.....		
Total, 163.....		100.0 %
25 feet to 50 feet—		
Safe, 131.....		86.2 %
Unsafe, 21.....		13.8 %
Total, 152.....		100.0 %
50 feet to 75 feet—		
Safe, 40.....		80.0 %
Unsafe, 10.....		20.0 %
Total, 50.....		100.0 %
75 feet to 100 feet—		
Safe, 49.....		92.5 %
Unsafe, 4.....		7.5 %
Total, 53.....		100.0 %
Over 100 feet—		
Safe, 75.....		89.3 %
Unsafe, 9.....		10.7 %
Total, 84.....		100.0 %

The 1927 results emphasize still further the superiority of tubular wells over dug

wells and springs. This appears in the following table:

Tubular—		
Safe,	806	86.6%
Unsafe,	125	13.4%
Total,	931	100.0%
Dug—		
Safe,	36	48.7%
Unsafe,	38	51.3%
Total,	74	100.0%
Springs—		
Safe,	17	68.0%
Unsafe,	8	32.0%
Total,	25	100.0%

Samples were analyzed from 292 school supplies, 254 of which, 87 per cent, were found safe. This is a gain over the 80 per cent found safe last year.

Municipal supplies totaling 161 were tested. Of these, 138 or 85.7 per cent were found safe. In addition to those judged safe upon analysis, 52 others were known to be safe from information in the office. A complete total of 190 municipal supplies were therefore posted as approved by the Michigan Department of Health.

Twenty-eight tourist camps were inspected on the survey. The ratings of the camps based on a composite consideration of all camp facilities show 53.6 per cent good, 35.7 per cent fair, and 10.7 per cent bad.—E. D. R.

MICHIGAN SAFETY CONGRESS

All physicians interested in industrial medicine or surgery are cordially invited to attend the sessions of the Michigan Safety Congress to be held at the Hotel Olds in Lansing on April 11, 12 and 13.

On the afternoon of April 12 and the morning of the 13th there will be meetings of the Health Section. Topics to be discussed include "Dental Prophylaxis in Industry," "The Value of Physical Examinations (a) From the Standpoint of the Management, and (b) From the Standpoint of the Physician," "Industrial Surgery with Special Reference to Rehabilitation of the Injured," "Preventive Medicine in Industry," "The Nurse in Industry," and "The Status of Medical Work in Industry as Revealed by a Census of Forty Michigan Plants."

THE HEALTH OFFICER'S MANUAL (Continued)

VI. CARRIERS

(A) Definition:—

When an infectious agent is found on a person having no clinical manifestations of the disease, the person is said to be a carrier.

1. Incubatory Carrier—When an infectious agent is found on a person having

no clinical manifestations of the disease, who develops the disease within the incubation period after this finding, such person is an incubatory carrier.

2. Convalescent Carrier—When an infectious agent is found on a person having no clinical manifestations of the disease—soon after having had the disease, the person is a convalescent carrier.

3. Direct Contact Carrier—When an infectious agent is found on a person having no clinical manifestations of the disease—who has been in direct contact with a case of the disease, the person is a direct contact carrier.

4. Remote Contact Carrier—When an infectious agent is found on a person having no clinical manifestations of the disease—and who has had no contact with any active clinical case of the disease, the person is a remote contact carrier.

VII. IMMUNITY

(A) Definitions:—

For the purposes of these Rules and Regulations, persons may be regarded as immune to a disease under the following conditions:

1. To Diphtheria—(a) Having a negative Schick test. (b) Having been inoculated with adequate doses of toxin-antitoxin as shown by a negative Schick test. (c) Having been given at least 2,000 units of diphtheria antitoxin, the person will be immune for six weeks.

2. To Smallpox—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness. (b) By successful vaccination with cowpox virus, not more than five years having elapsed since the vaccination.

3. To Scarlet Fever—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness. (b) Having been inoculated with adequate doses of scarlet fever streptococcal toxin as shown by a negative Dick test. (c) Having a negative Dick test.

4. To Typhoid Fever or Paratyphoid—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness. (b) By the inoculation of $2\frac{1}{2}$ billion of dead typhoid bacilli and $2\frac{1}{2}$ billion of paratyphoid bacilli (A and B) given in three divided doses one week apart, the dosage of typhoid bacilli being of 500 mil-

lion, one billion and one billion respectively; not more than two years having elapsed since the inoculation.

5. To Whooping Cough, Mumps, Chickenpox, Measles and German Measles—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness.

(B) Other Definitions—

1. For the purposes of these Rules and Regulations the word "susceptible" shall include all persons not known to be immune.

2. For the purposes of these Rules and Regulations the word "vaccination" shall mean the inoculation of cowpox virus, and the formation of a typical lesion which heals with a characteristic scar.

3. For the purposes of these Rules and Regulations the word "contact" shall mean any person who has been sufficiently near to any infected person or animal to have been exposed to the possibility of the transfer of the infectious material either by direct contact or indirectly by articles freshly soiled by discharges from the patient.

VIII. CONTACTS

1. Contact with a communicable disease will usually be found to be in one of three degrees of intimacy.

Contact by reason of living in the home of a case is most intimate and therefore requires the closest degree of supervision, looking toward the contact developing the disease.

For example, a person who is a diphtheria contact by reason of having lived in the home of a case should be subject to the most careful supervision. That is, the adults and immune children have their noses and throats cultured to determine whether they are carrying the organisms. the susceptible school children are excluded from school for a sufficient length of time to allow the development of the disease, if they are to develop it from that contact. This exclusion period is one week.

The second degree of intimacy of contact is that contact which results from being in a schoolroom or small school at the same time as a case in any stage of the development of the disease. For example, a child who is a contact by reason of having been in a schoolroom or small school simultaneously with a case of diphtheria should be given the advantage of (1) a throat culture examination, (2) a physical examination for any of the signs and symptoms that may be signs and symptoms of diph-

theria, before the beginning of school work, every day for one week after the last possible exposure to a case of diphtheria.

The third degree of contact is that such as all persons are exposed to in carrying on the usual functions of their daily life. One cannot live in a modern community, ride on street cars, go to theaters, attend church, etc., without being exposed to this degree of contact with infectious disease. To illustrate again with diphtheria:—Persons are advised to call their physician's attention at once to any (1) sore throat, (2) rise of temperature, (3) or any indisposition of any kind for a period of one week after any possible exposure.

IX. CONTAGIOUS DISEASES ON DAIRY FARMS

1. Certain communicable diseases are readily transmitted by means of milk or dairy products. For this reason these Rules and Regulations require that "owners and managers of any dairy farm or any place where dairy products are handled or offered for sale shall REPORT all cases of communicable disease among their employes or their employes' families, to the local health officer.

2. Whenever a case of diphtheria, scarlet fever, smallpox, poliomyelitis, meningitis, typhoid fever or septic sore throat is found to exist on any farm or other place where dairy products are handled or offered for sale, the sale of all milk from these premises shall be stopped at once.

3. Where the sale of milk or dairy products has been stopped under the provisions of the previous paragraph, the local health officer is hereby authorized to make an investigation as to the possibility of resuming the sale of such dairy products.

4. When the health officer finds such circumstances that:—

- All the animals can be cared for and
- The milk can be handled by persons who are not living in a quarantined area and
- All the utensils can be washed and cleaned by persons not living in the quarantined area and

d. The persons in the quarantined area shall not come in direct or indirect contact with the animals or the milk or the utensils or any person who does come in contact with them, these facts shall be stated in writing to the State Commissioner of Health who may, in his discretion, permit milk to be sold from these premises under these circumstances.

ADRIAN'S "MYSTERIOUS EPIDEMIC"

The "mysterious malady" in Adrian that

aroused newspaper comment recently was explained by the local health officer in answer to inquiry from Dr. Kiefer. We quote from the health officer's letter:

"Replying to your letter of February 22, I will say that we had five cases of streptococcic infection of the throat which took on a fulminating type and caused death. These cases were confined to four families.

"In the particular cases mentioned in the clipping which you enclosed, the mother died of erysipelas which complicated or followed a streptococcic infection of the throat. The throat symptoms were not severe but the adenitis was very severe, and as this subsided the erysipelas developed. The daughter previous to the mother's illness developed a streptococcic infection of the throat and when she was apparently recovering, a hemorrhage from the throat occurred and caused her death. This is the report as I obtained it from the attending physician.

"We had three other cases where death occurred and these cases started with a sore throat and adenitis, peritonitis developed early and death followed in four or five days.

"We have had a large number of cases of sore throat with adenitis and often parotiditis usually unilateral and the most of these cases were not attended by physicians.

"I do not think it is anything different from what is prevailing throughout the state, but we were unfortunate in having these fatal cases. It is very evidently very infectious. At present we have no severe cases and have not had any for ten days."

EMERGENCY AID

A trip that in essentials if not in setting re-enacted the famous expedition to Nome was made by Dr. Don M. Griswold, Deputy Commissioner of Health, recently.

At three o'clock on the afternoon of February 28 a telephone call came in from Farwell, a little town in the southern part of Clare County. Five children were ill with diphtheria, one had died, the schools had been ordered closed, and the community asked help from the State Department of Health.

At three-thirty Dr. Griswold was on his way, by automobile, with antitoxin. Arriving at Farwell he found that the six children belonged to a family of ten children, living with their parents in a little house. Two nurses had already been sent in by interested friends.

Giving of antitoxin had been delayed be-

cause the laboratory report on the child that died had been negative.

At Dr. Griswold's suggestion additional antitoxin was given to all the children in the family. Subsequently, the school board held a meeting and voted to have the local physician give toxin-antitoxin in the schools. The school was opened on the following Monday morning, March 5, and no subsequent cases of diphtheria have been reported.

PREVALENCE OF DISEASE

	February Report	Cases Reported	January	February	February	Av. 5 yrs.
			1928	1928	1927	
Pneumonia	484	798		679		824
Tuberculosis	404	538		342		393
Typhoid Fever	24	31		33		36
Diphtheria	362	300		485		473
Whooping Cough	594	665		534		648
Scarlet Fever	1,091	1,283		1,423		1,453
Measles	1,539	2,580		902		2,477
Smallpox	168	147		186		196
Meningitis	10	15		13		16
Poliomyelitis	7	5		2		3
Syphilis	1,496	1,222		1,148		1,021
Gonorrhea	855	596		717		818
Chancroid	12	11		12		12

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

March, 1928

	+	-	+	Total
Throat Swabs for Diphtheria	.....	.....	.....	1293
Diagnosis	27	225	.....	.....
Release	32	96	.....	.....
Carrier	24	873	.....	.....
Virulence	7	9	.....	.....
Throat Swabs for Hemolytic Streptococci	.....	.....	.....	1011
Diagnosis	62	52	.....	.....
Carrier	77	820	.....	.....
Throat Swabs for Vincent's	19	233	.....	252
Syphilis	.....	.....	.....	7986
Wassermann	.....	.....	.....	.....
Kahn	1165	6760	61	.....
Darkfield	.....	.....	.....	.....
Examination for Gonococci	141	1165	.....	1306
B. Tuberculosis	.....	.....	.....	456
Sputum	59	351	.....	.....
Animal Inoculations	2	44	.....	.....
Typhoid	.....	.....	.....	170
Feces	17	71	.....	.....
Urine	.....	7	.....	.....
Blood Cultures	3	34	.....	.....
Widals	12	26	.....	.....
B. Abortus	.....	.....	.....	46
Dysentery	.....	.....	.....	51
Intestinal Parasites	.....	.....	.....	30
Transudates and Exudates	.....	.....	.....	153
Blood Examinations (not classified)	.....	.....	.....	214
Urine Examinations (not classified)	.....	.....	.....	357
Water and Sewage Examinations	.....	.....	.....	484
Milk Examinations	.....	.....	.....	95
Toxicological Examinations	.....	.....	.....	11
Autogenous Vaccines	.....	.....	.....	4
Supplementary Examinations	.....	.....	.....	137
Unclassified Examinations	.....	.....	.....	746
Total for the Month	.....	.....	.....	14802
Cumulative Total (fiscal year)	.....	.....	.....	104027
Increase over this month last year	.....	.....	.....	2388
Outfits Mailed Out	.....	.....	.....	16290
Media Manufactured, c.c.	.....	.....	.....	246562
Antitoxin Distributed, units	.....	.....	.....	20225000
Toxin Antitoxin Distributed, c. c.	.....	.....	.....	21570
Typhoid Vaccine Distributed, c. c.	.....	.....	.....	2908
Silver Nitrate Ampules Distributed	.....	.....	.....	5036
Examinations Made by the Houghton Laboratory	.....	.....	.....	2705
Examinations Made by the Grand Rapids Laboratory	6686

THE JOURNAL

OF THE

Michigan State Medical Society

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APRIL, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL**OUR WAGON AND THE STAR**

It is a novel experience, not unmixed with a feeling of apprehension, to assume the editorial duties of a journal such as this which is in its twenty-seventh year and therefore, as things go, well into manhood. The earlier years have been fostered by such men as Biddle, Schenck, Haughey and lastly Warnshuis and under their aegis its evolution has been continuous and has reflected the development of the science and art of medicine and surgery during the greatest quarter of a century in the history of medicine. A magazine published under the auspices of a State Medical Society is in no sense a narrowly specialist publication; that is, its purpose must not be confined to the interests of any single department of either medicine or surgery. The editorial view must be broad rather than intensive. Contributions of an obviously technical nature will find their way into specialist journals. The article for this publication, while it may be written by the specialist, will have a broader appeal.

The present editor enters upon his

duties in the hope that he will be worthy of his editorial lineage. Some changes have doubtless been noted in the March number. Change does not necessarily mean improvement. Variety, however, is the spice of life and it will be our policy to present a monthly program that we hope will meet the approval of all.

The editing of a medical magazine is somewhat like standing behind the radio transmitter or talking into a dictaphone. There is a certain loneliness about it. The audience in the case of the radio and the editor is in front, but invisible; the response is not immediate. If the time comes when the reader no longer removes the wrapper from his Journal, it means editorial failure. We, therefore, welcome criticism and suggestions for improvement.

One or two new features might be mentioned, for instance, the column of general medical news consisting of short, condensed paragraphs, embracing current happenings at home and abroad; secondly, the Doctor's Library with an introductory paper written by some book lover in the profession. It is our purpose also to print from time to time reports of clinics or staff meetings showing the actual discussions which take place at various hospitals in the State. In this way the Journal will fill the role of clearing house for the ideas of men in active performance of the work. You may be located far from the madding crowd, yet this fact does not preclude you from sending in an account of some interesting case or experience you may have had. The very situation which places you on your own resources has given you a marked advantage over your confrere in the city who has only to step to the telephone for assistance. But, however remote or isolated your location, we shall be pleased to hear from you.

DR. JONES CONGRATULATIONS

It is a pleasant privilege we exercise in extending our felicitations to Dr. George W. Jones of Imlay City, on the attainment of his eighty-ninth birthday with the mental alertness and good health of a man many years his junior. The doctor says he has no panacea, no elixir of life to offer to account for his longevity. Elsewhere in this number of the Journal is an address by the doctor delivered on the occasion of the complimentary dinner tendered him by one of his sons. If there is any elixir that will postpone the infirmities of

age, the doctor has at least hinted at it, namely work, not the activity of the drudge but work directed by intelligence. An important antidote to the limitations of age is an equal mind, aequanimitas as Osler was wont to inculcate in his happy philosophy. Truly the Kingdom of Heaven is within you. "For" as Cicero has so aptly put it, "to those who have not the means within themselves of a virtuous and happy life every age is burdensome; and, on the other hand to those who seek all good from themselves, nothing can seem evil that the laws of nature inevitably impose."

The doctor has been a great reader and probably at no time greater than the past two or three years according to a statement by himself. One cannot become old in the real sense so long as his interests are varied and keen. The fact of having raised two sons whom he has lived to see successfully established in medical and surgical practice, has also been a powerful incentive to study, for the sires live in the sons. These sons have given the father an opportunity to live his academic life over again much as grandparents renew their younger days in their grandchildren. We repeat so long as a man maintains intelligent contact with his professional work or with his present he cannot grow mentally old.

Dr. Jones does not look his chronological age, otherwise he might say with Adam in *As You Like It*:

"Though I look old yet I am strong
and lusty,
For in my youth I never did apply
Hot and rebellious liquors in my blood,
Nor did not with unashful forehead
woo
The means of weakness and debility;
Therefore my age is as a lusty winter,
Frosty but kindly."

INCOME AND USEFULNESS, HOW TO INCREASE BOTH

Many of the readers of the Journal might question the propriety, also the ability of the Editor to give sound advice on this subject. "It were easier to tell twenty men what were best to be done than to be one of the twenty to follow mine own instruction," said the Bard of Avon. However, comment is based upon the substance of a prize essay on the subject written by Dr. Hiden and published by Southern Medicine and Surgery. We are living at a time

when the inroads on the legitimate field of medical practice are many and sometimes questionable. The quack and the charlatan, like the proverbial poor, we shall have always with us. There is a growing custom among patients to select their specialists directly without consulting the physician in general practice. This is particularly true in the larger centers of population. Then again there are the activities of organizations of various kinds which tend to usurp the functions of the physician and pauperize the patient under the guise of socialized medicine.

The movement towards the enlightenment of the laity in regard to the advances of scientific medicine should be welcomed in this State since it turns the minds of the people to the service the medical profession are able to render. The value of periodic medical examinations is being stressed. Dr. Hiden, the author of the prize essay, emphasized the importance of thorough gynecological examinations. These were usually only occasional in general practice, and the family physician was often expected to give socalled "uterine tonics" or "ovarian sedatives" without even making a pelvic examination. "Almost any family physician," says the writer, "has ample opportunity for gynecological examinations, if he chooses to do this work. Moreover, such examinations not only furnish ample clinical material for more accuracy in diagnosis and greater efficiency in treatment, but they often reveal morbid conditions that would otherwise escape notice; namely, such conditions as uterine displacement, catarrhal conditions, endometritis, uterine polyps, uterine fibroids and myomata, cervical tears, erosions, pus tubes, hematomata, hematocoeles, vesico-vaginal fustulae, pelvic adhesions and simple congestions. Here is unmistakably a great field for the reasonably well-informed practitioner. In making this latter statement I am not advocating radical abdominal and pelvic surgery for the family physician; but why should he not train himself to treat successfully such conditions as simple pelvic congestions, uterine cervical catarrhs, cervical lacerations and erosions, uterine retroversions of the simpler types, endometritis, uterine polyps, cervical atresia, symptoms of menorrhagia, simple forms of amenorrhoea, cervical ulcers or the distressing symptoms of vaginitis?"

Other fields at once suggest themselves. The examination of the eyes for errors of refraction could be made a source of profit

to the general practitioner as well as greatly enhance his usefulness to the community. With his knowledge of the eye, he could master fairly well subjective refraction within a few weeks.

The writer goes on to stress the importance of a properly equipped office which is next in importance to first class mental equipment; the developing of an office practice is emphasized as well as the attendance upon medical meetings. He advocates more discussion of business and sociologic aspects of medicine at these meetings which have been devoted hitherto almost exclusively to the scientific phases of the work.

Conditions are bound to change and the wise physician is he who takes occasion by the hand and adjusts himself to his changing environment.

"LET YOUR DOCTOR DECIDE"

The intensive educational program of the National Tuberculosis Association took place in March of this year, and was a nation-wide move to induce patients to visit their family physician for an earlier diagnosis of tuberculosis. This work should receive the active co-operation of all medical men, inasmuch as it is a necessary part of procuring best results in a disease, the symptoms of which are too often neglected by the people. The slogan, "Let Your Doctor Decide," has been abundantly spread throughout this state by the Michigan Tuberculosis Association and the various County Tuberculosis Societies, the Tuberculosis Society of Detroit and Wayne County being particularly active.

Scientific medicine in tuberculosis on the whole, has advanced beyond the present capacity of this state. It is now a well known fact that the greatest source of infection is an open case of tuberculosis in a home containing children, especially where overcrowding exists. Long continued exposure to a very active case can have only evil results. In spite of this, the procuring of institutional beds for many such indigent patients at present remains an impossibility in many parts of Michigan. Advancement in treatment has been slow perhaps but steady. In recent years there has been added the particularly useful artificial pneumothorax which according to Watson, "will restore the health from 40 to 50 per cent of cases having chronic and acute forms of tuberculosis; of these cases when treated by the usual sanatorium methods, approximately 7 per cent will recover." (This applies to cases

where artificial pneumothorax is indicated). A further appreciable percentage of patients can be helped by intrapleural pneumolysis when adhesions exist; then, too, there is phrenicotomy and the very useful thoracoplasty. All these recent additions in the way of surgical treatment have been made possible by the irreplaceable X-ray. With frequent use of the X-ray it is now a comparatively simple matter, when considered with present symptoms and signs and previous history to make an early diagnosis of tuberculosis. Where necessary for diagnosis physicians should insist upon a return for further observation in a week, a month, or 3 months, as fits the case. X-ray too, has turned the lungs, at one time an unseen field, into a visible one, making continued true observations of progress a comparatively simple matter. Thus, for the state and its constituent components to get best results in accordance with recent medical and surgical advances in tuberculosis, not only are more beds urgently needed, but the institutions must be staffed by capable physicians and surgeons and contain up-to-date equipment.

In the sparsely populated counties of Michigan, primary education concerning the disease is particularly necessary and too much stress cannot be placed on the slogan, "Let Your Doctor Decide," as in many places the various cults "treat" and "cure" an appreciable share of tuberculous patients. In those localities, too, there still exists marked misunderstandings and dread out of all proportion to facts. In the larger cities, the people as a whole are better acquainted with the possibilities of prevention and cure but unfortunately the doctors and patients are both often discouraged because of the hopelessly long delays in procuring hospitalization, where necessary, for those unable to pay full rates for the long stay usually required.—

R. S. Brachman.

THE A. B. C. OF VITAMINS

The announcement of a new source of vitamin D has been made by the medical research council of Great Britain. Webster and Rosenheim have been reported to have produced the anti-rachitic vitamin by the action of ultra violet ray upon a definite chemical substance, ergosterol. The same workers had also experimented with the growth promoting vitamin A. Their conclusion is to the effect that the proportion present in some liver fats may far exceed that found in cod liver oil which is believed

to be the richest source of this vitamin. The liver oils of salmon and halibut are considered by these workers to be more than a hundred times as rich in vitamin A as cod liver oil. The liver fats of sheep, calf and ox contain ten times as much vitamin A as good cod liver oil, and they are said to be from two hundred to a thousand times as rich in vitamin A as the average sample of butter. The fats extracted from liver are free from the unpleasant odor of fish oils. The low melting point of liver fats greatly facilitates their mixture with other food substances.

On good scientific authority we have another new vitamin which has been designated "Factor 'H'" by its discoverers. "Factor 'H'" we are told is found in raw liver and to a slight extent in dried milk. So far the only need for this accessory food substance is for young trout. With it they grow normally; without it they die.

With apologies to the nutritional chemist, it seems that calories have given way somewhat to vitamins; at least vitamins appear to be occupying the center of the stage. They not only occupy the front page of the newspapers but the magic vitamin has found its way into the literature of the medical charlatan. It also enters into the slogan of the fruit dealer.

There have been many editorial references to vitamins, some even in a spirit of levity. The British Medical Journal makes them a subject for poetry; whether this be levity or sicklied o'er with the pale cast of thought, we will leave the reader to decide. The poem is entitled the A. B. C. of Vitamins.

The scurvy flew through the schooner's crew
As they sailed on an Arctic sea,
They were far from the land and their food was
canned,
So they got no vitamin C,
For "Devil's the use of orange juice,"
The skipper 'ad said, said he,

They were victualled with pickled pork, my dears,
Those marines bold and free,
Yet life's but brief on the best corned beef
If you don't get vitamin C.

Vitamin D is familiar even to the layman through its associations with that unctuous piscatorial cod liver oil. The poet has a word for vitamin E by which the "barren may shake off their sterile curse."

Now vitamins D and A, B, and C
Will ensure that you're happy and strong;
But that's no use; you must reproduce
Or the race won't last for long.
So vitamin E is the stuff for me,
And its praises end my song.

We'll double the birth-rate yet, my dears,
If we all eat Vitamin E,
We can blast the hopes of Maria Stopes
By taking it with our tea.

Doubtless some mute inglorious Isaak Walton will come forth to sing the glories of "Factor 'H'" that hitherto unknown food principle which accounts for the gustatory properties of the trout. With the rest of the alphabet before us what may we not expect?

SCIENCE SERVICE

The majority of the items under the heading, "General News", are supplied by Science Service. The principal object of this institution, which is located at Washington, is to interpret and furnish scientific information to the public. News items are collected and passed upon by competent authorities in the various departments of scientific endeavor, including also medicine and its allied branches. Accuracy is insisted upon rather than the sensational. To obtain the best results the interpreter of scientific truth must combine the qualities of the journalist. The director of Science Service is Edwin E. Slosson, Ph. D., the author of Creative Chemistry, which has had a wide circulation. Dr. Slosson has the confidence not only of scientific men, but of all other men and women of culture as well.

Such items of news will appear in the Journal as we hope will be of special interest to our readers. Condensation and variety will be aimed at in the endeavor to produce a readable page.

FURTHER REFINEMENT IN DIAGNOSIS

Dr. J. Forestier of Aix Les Bains, France is known personally to many physicians in this state and his work is known to many more. Dr. Forestier in a recent address reviewed the development of the use of lipiodol injections for X-ray diagnostic purposes. It is six years since Forestier and Secord, working together, discovered the use of lipiodol as a diagnostic agent. It is widely used in the United States at the present time. It is non-irritating to the mucous as well as serous membranes for among the uses it has been put is that of diagnostic aid in conditions encroaching on the spinal canal.

This agent has been used most widely in demonstrating normal or abnormal conditions of the bronchial tree. Forestier described several methods of administration. The usual one is the intra-tracheal. The

injection has been accomplished with children by means of a small curved tube resembling a tracheotomy tube. Another method is destruction of the deglutition reflex by means of local anesthesia so that the act of swallowing sends a mouth full of the oil down the trachea instead of the esophagus.

Lipiodol has been employed in tuberculosis to check up the results of artificial pneumo-thorax therapy. Bronchiectasis is shown very clearly by its use. Extra pulmonary tumors are readily differentiated.

Lipiodol has been employed as an agent in gynecological diagnosis particularly in determining the patency of the tubes in case of suspected sterility, and also in the differentiation of pelvic tumors. Forestier has devised a special instrument for the intra-uterine injection of the oil so as to prevent the back flow. This consists of a syringe nozzle with a shoulder to it which is left in place after the injection while the radiographic exposure is being made.

A third use for which lipiodol injections are employed is the determination of points of compression of the spinal cord. Lipiodol being heavier than the spinal fluid has been found to sink. A globule about 1 c.c. is injected into the cord (*cisterna magna*) and radiographs made with the patient in the oblique or in the upright position. The point of pressure by a spinal cord tumor may be easily located by radiography.

This radiopaque substance may be used also in diagnostic work on the nasal accessory sinuses. It is a fairly exact method of determining the thickness of the mucosa in cases of long standing sinusitis.

EDITORIAL NOTES

The editor enjoyed the hospitality of the Genesee County Medical Society March the seventh. As is well known, Flint is the home of President Randall, also of the Buick and the Chevrolet as well as one of the most progressive and harmonious Medical Societies in the United States. The scientific meetings of the Genesee County Medical Society are held every second Wednesday noon following a get-together luncheon. After the business and scientific features the members of the Society by mutual agreement take the afternoon to themselves. We presume that later in the season the time is well spent on the golf links. We made no enquiries regarding how the remainder of the day is spent during the winter months. Considering the numerous distractions during the evenings, the midday medical meeting appears to us as an idea that should be widely adopted.

Tuition in the Yale Medical School will be raised from \$300 to \$500 a year. Medicine par-

ticularly in the east bids well to become a profession for rich men's sons. Father having worked his own way through college will now have to work his son's way through. The high cost of medical education will eventually eliminate completely that class who by patient effort and industry entered the ranks of the medical profession, the young man who taught school for a few years to get enough ahead to take a course in medicine. The youth and enthusiasm he brought to school teaching made him of untold value to the community, and the training in teaching and the contacts he made rendered him later of value as a physician.

The report of the commission on medical education January, 1928, contains some very interesting information on the subject we hope to comment from time to time. The commission sent out a questionnaire several months ago to which it received returns from over 1,600 physicians. As these were carefully selected they may be taken to represent a cross section of the medical profession of the United States. These physicians were grouped as follows, first, those who were graduated prior to 1900 or 32 per cent; second, those between 1901-1910 or 38 per cent; and third, those whose graduation was in 1911 or later, 30 per cent. Of the first group 39 per cent are farmers' sons; of the second 30 per cent, and of the third 26 per cent are farmers' sons. It is a significant fact that the farmer still, though in decreasing proportion, continues to furnish the largest number of candidates for medicine of any single calling. Doubtless the urbanization of our population accounts for the progressive decrease of farmers' sons entering medicine.

OUR SENTIMENTS, TOO

(Southern Medicine and Surgery)

In order to keep up with medical progress, let us apply to ourselves Bacon's famous saying, "Reading maketh a full man, conference a ready man, writing an exact man." It is absolutely necessary to read a few good medical journals. Most of their articles are summarized at the end, and this gives a clue to their value. With many, this summary is all that one needs to read. Others will bear reading carefully, and once in a great while one will bear repeated readings. The book salesman is a frequent reminder of current medical publications. My advice is to give him a hearing, but not to buy too many books. To quote Bacon again, "Some books are to be tasted, others to be swallowed, and some chewed and digested." For my part, I prefer monographs to systems of medicine, which are usually too bulky and cumbersome for ready reference, besides being so long in gestation that when issued many of their articles are behind current opinion.

One plea I would like to make to my medical brethren is that they do not confine their reading to medical subjects alone, but devote at least half an hour daily to reading something absolutely foreign to their work. If this be done just before retiring, it will help to invite slumber to one's pillow.

As to conference, it may be obtained in several ways. Every doctor should attend all medical societies possible, and at least once every year or two take off from one to four weeks to browse around medical centers.

The third part of Bacon's observation is absolutely true, as any man who has ever really

"worked up" a paper upon any subject can testify. It is surprising how much clearer one's knowledge of a subject becomes after an honest effort is made to put it into written words that are easily understood by others. Any one who will try writing at least one paper a year will never regret it. And I believe that in lecturing any doctor will learn more than he will teach.—From a prize essay by Dr. Wm. Johnston.

APRIL TWENTY-FIVE YEARS AGO

(From the Journal of the Michigan State Medical Society)

Dr. R. W. Gilman contributed a paper on Intra-tympanic Injections of Pilacarpine in Chronic Catarhal Deafness. Dr. W. F. Metcalf wrote on Treatment of Puerperal Sepsis. Dr. H. O. Walker, on Observations upon the Technique of Abdominal Surgery; Dr. Earl Bingham of Grand Rapids, on Uremia in the Process of Child Bearing; Dr. Chas. D. Aaron, Detroit, on Enteropexis and Pregnancy. Dr. Leartus Connor wrote two editorials, one on County Societies and Public Questions, the other on the Medical Society Habit. The matter of medical registration occupied a prominent place at this time. This number of the Journal contained a letter from B. D. Harison on the Nottingham Bill. There was also an article by A. N. Collins with the following significant title, "Is the General Practitioner Fairly Paid, If Not, Why Not?" Dr. S. E. Sanderson discussed the subject, "Gastroenterostomy" with special reference to the McGraw Elastic Ligature.

DEATHS

DR. E. L. EMMONS

Dr. E. L. Emmons of Detroit died on February 24th from cerebral hemorrhage. The doctor was born at Elsie, Mich., in 1869. After attending the schools of his home town he entered the Detroit College of Medicine whence he was graduated in the class of 1893. He had been in active practice in Detroit until his death which occurred in his 60th year. He was a member of the Wayne County Medical Society, the Michigan State Medical Society and the American Medical Association. He was also a prominent Mason, being a member of the Michigan Sovereign Consistory and also Moslem Shrine.

MRS. EDWARD BERNSTEIN

Mrs. Edward Bernstein, wife of Dr. Edward Bernstein of Detroit, died on March 14th. Mrs. Bernstein was a native of Baltimore, Md., and had completed the requirements for a medical degree and subsequently engaged in practice in her native city. Following her marriage to Dr. Bernstein thirty years ago, she gave up practicing medicine. Dr. and Mrs. Bernstein lived in Kalamazoo for twelve years prior to coming to Detroit in 1927, where Dr. Bernstein has been in practice since. Mrs. Bernstein was a frequent attendant of the Wayne County Medical Society along with her husband. Besides her husband she is survived by two sons, U. P. and J. E. Bernstein.

SURGERY SEPARATES INCOMPLETE "TWINS"

A successful operation on what might be called incomplete Siamese twins has just been reported to the medical journal *Lancet*, London, England, by Sir John Bland-Sutton. An account of the case was sent to Sir John, himself a consulting surgeon at the Middlesex Hospital, by a medical correspondent in India. Attached to a Hindu boy baby at birth was a parasitic "brother" possessed of the full complement of limbs but minus head, lungs and heart. A month after birth the parasite was growing rapidly so that the parents sought surgical aid for the relief of the child. The operation was performed and when last heard from the child was well and developing normally. Such cases, declared the British surgeon, should encourage surgeons generally to separate conjoined twins and spare the fully developed individual, not only life of bondage, but the ignominy of being exhibited in public shows.—Science Service.

Erysipelas may now be added to the list of diseases vanquished by man, Dr. Konrad E. Birkhaug of the University of Rochester School of Medicine, told the American College of Physicians meeting at New Orleans. As a result of four years of work, Dr. Birkhaug has developed an antitoxin treatment for use in the early stages of erysipelas that gives results commensurate with those obtained through the use of diphtheria antitoxin in the early hours of that disease. The erysipelas treatment reduces to half the time that the patient must spend in the hospital, Dr. Birkhaug told the doctors. The mortality in adults has been reduced from 12 to only four per cent, while recurrent attacks of erysipelas have been prevented through a course of immunization through the use of toxin. Dr. Birkhaug observed in 1924 that nine-tenths of the streptococci associated with the disease were of a specific type. This form of organism had been suspected of the crime of causing erysipelas when it was discovered in the lesions of the disease in 1881. The production of the disease experimentally in animals and their protection with a specific antiserum confirmed Dr. Birkhaug's idea that the particular kind of streptococci observed was the cause of the disease. The next year he discovered the toxin produced by the streptococci and then in 1926 erysipelas antitoxin was produced. The evidence for erysipelas specificity has been confirmed by other laboratories since Dr. Birkhaug's pioneer work.—Science Service.

I often wonder, if I didn't know English, what I should think of the sound of it, well talked. I believe I should esteem it a soft speech, very pleasant to the ear, varied but unemphatic, singularly free from guttural or metallic sounds, restful, dignified, and friendly. I believe—how prejudiced one is!—that I would choose it, well spoken, before any language in the world, as the medium of expression of which one would tire last. Blend though it be, hybrid between two main stocks, and tintured by many a visiting word, it has acquired rich harmony of its own, a vigorous individuality. It is worthy of any destiny, however wide.—John Galsworthy.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. John Sunwald, professor of hygiene, public health and physical education at the University of Michigan, was elected president of the Michigan Public Health Association at the seventh annual meeting at Lansing, Mich.

"In many of the simplest matters no physicians, or surgeons can give advice based on scientific knowledge, even if they hazard opinions based on earnest but uncontrolled observations. It is not yet scientifically known, for instance, how much water a man should drink in the day, or what is the best kind of bread to eat. It is for those who have the most reason to know the public value of this kind of knowledge to persuade public opinion along the only secure path towards it, namely, the timely and liberal support of scientific investigation."—Medical Research Council.

A new type of dark glasses for outdoor wear at tennis, golf and other sports, and said to be especially useful for auto drivers at night when meeting cars with glaring headlights, has been produced in the optical works of the Zeiss firm at Jena, according to Science Service. The basis for the new eye protection consists of two wedge-shaped pieces of glass fused together. The upper member of the pair is made of a dark, gray-brown glass, while the lower part is clear and uncolored. Goggles made from this material are thus very dark at the top, shading off gradually into clear glass at the lower edge. Motorists, encountering glaring headlights, simply duck their heads a little and look through the tops of their goggles until the offending car has passed, when they again make use of their normal vision through the lower parts of the glasses.

Eye, ear, nose and throat doctors of the world will meet for the first time at the First International Congress of the Oto-Rhino-Laryngological Society, to be held in Copenhagen, Denmark, July 29 to August 1. That was the announcement made today by the American Committee of the Society, 25 Broadway, New York. More than seventy-five specialists will represent the United States at the Congress. These doctors will also spend some time visiting at various large cities in France, England, Germany, Norway and Sweden. Clinical discussions will be held in these countries with European doctors presiding. The Congress will concern itself with questions relating to the treatment of the many maladies, injuries and infections of the eye, ear, nose and throat. It has been reported from abroad that very successful methods have been found for sinus trouble and middle ear deafness.

An attack on cancer is being made by high frequency electricity, close in wavelength to the short waves that have recently been found so effective in radio communication. The researches conducted by the U. S. Public Health Service under the direction of Dr. J. W. Schereschewsky with his laboratory at the Harvard Medical school, have been in progress at intervals during

the last five years and have now been informally reported to a congressional committee in connection with a request of an appropriation of \$5,000 to provide assistants and materials for the work. Experiments so far have been confined to mice and chickens. Much progress must be made before there can be any possibilities of applying the results to human beings. Mice with tumors artificially acquired in the laboratory were improved by being subjected to doses of oscillating electricity produced by vacuum tubes similar to those used in radio sets.—Science Service.

The New York Academy of Medicine will hold its first "Annual Graduate Fortnight" October 1 to 13. The general subject of the work will be, "The Problem of Aging and Diseases of Old Age." Not only will the diseases and management of old age be discussed, but attention is to be directed toward the prevention of premature and postponing of normal aging. Diseases of the heart, and affections of blood pressure and kidneys will be studied under the guidance of men of national and international reputation. By concentrating all the available knowledge and experience on a single problem each year, it is believed the greatest benefit to general practitioners and specialists as well, can be secured. The coming sessions will devote considerable time to pointing out the effect of wrong modes of living. Aging, as it relates to health insurance, and to economic and industrial problems, is to be included in the curriculum.

The grand cross, the highest rank of the Legion of Honor, has been conferred on Dr. Albert Calmette of the Pasteur Institute, who has developed a preventive vaccine treatment for tuberculosis. Some 52,772 children have been vaccinated at birth in Paris and the provinces since July 1, 1924, when the vaccine was first put at the disposal of physicians, Dr. Calmette told members of the Academy of Medicine. Cards of 5,749 vaccinated infants born in tuberculous surroundings are kept in the Pasteur Institute files for record and observation. Infants in the group under one year of age present a mortality of 3.1 per cent, while that of unvaccinated children was 8.5 per cent, the scientist pointed out. The general mortality, he declared, had been reduced more than 50 per cent. Among the children who have been vaccinated that have reached the ages of from two to three and a half years, he added, the tuberculosis deaths have been practically nil. The vaccine is administered at birth and a second dose, from the Pasteur observations, seems to be unnecessary.

A family in which the male tendency is so strong that for four generations not a daughter has been born, has been discovered in San Pedro, Calif., through records reported to the Eugenics Records office. No daughters have been born in the four generations, although there have been thirty-five sons. The founder of the American branch of this family was born in Germany, the youngest of nineteen boys. He, in turn, had twelve sons. Out of these, one married an Eng-

lish Canadian woman. They had one son, who married and had three sons. Chance as the sole explanation of this continued production of male children only is considered to be highly improbable. One hypothesis advanced is that the female embryos are early destroyed by some hereditary lethal factor carried by the family from generation to generation. Dr. C. B. Davenport, director of the Eugenics Records office, is making a study of such one-sex families in an effort to determine their cause and he would welcome reports of other such families. Male families would, of course, immediately die out if normal families did not exist for furnishing wives to the male strain.

According to Science Service the healthiest year in history was 1927. Only 8.4 deaths for every 1,000 persons is the record for a group of insured wage-workers that numbers one-seventh of the total population of the United States and Canada. If the death rate of 1926 had prevailed, 8,808 persons among the insured group now living would have died, and if the rest of the population improved its health as much, some 50,000 lives were saved. If the death rate of sixteen years ago, 1911, had not been reduced 33 per cent to the present figures, last year's death list would have numbered 72,570 more among the insured group. These facts are shown by the statistics of the Metropolitan Life Insurance Company reporting the mortality of its industrial policy-holders which has been found to reflect the trends of the whole population. The outstanding health fact of 1927 was the big drop in the tuberculosis mortality, the rate of 93.5 per 100,000 representing a decrease of 4.8 per cent from the previous minimum of deaths from the great white plague. Three of the diseases of childhood, measles, scarlet fever and whooping cough, had encouragingly low death rates, while influenza and pneumonia reached unexpected low records. Never, except in the years immediately following the big influenza epidemics of 1918 and 1919, has there been as big a drop in the number of deaths from these much dreaded plagues.

TRI-STATE MEDICAL SOCIETY MEETS IN DETROIT APRIL 10

The Northern Tri-State Medical Society meets in Detroit April 10th. This is its first appearance in Michigan in three years, and in Detroit in several times three. For now fifty-five years a large group of medical men recruited chiefly from the smaller cities and larger towns of these three states, Michigan, Ohio and Indiana, have met in a rotating sequence in location. This is Michigan's year and Detroit has been selected as an ideal host and an ideal location for 1928. The Society is organized on a purely non-political basis and spends itself on an annual, one day, intensive series of clinics. The business of the organization is disposed of in very short order, consuming for the year not over half an hour. The remainder of the day and evening is then given over to purely scientific discussions, papers and clinics. This year the clinics commence at 8:30 a. m. and finish at 10:30 p. m. The capstone of a very remarkable edifice of talent, recruited from the three states, is an evening address by surgeon Dr. Elliott G. Cutler of Cleveland, Ohio. This address is to be presented before a joint meeting of the Northern Tri-State Medical Society and the Wayne County Medical Society, and is to be delivered in the Hotel Statler at 8:30 p. m.

Much of the work presented is to be entirely original, and some of it has never been presented before a general medical society before. Especially notable is the work done and presented by Mertz of Indianapolis, FitzGerald of Toronto and Collier of Ann Arbor.

Membership in the Tri-State organization is open to all members in good standing in the Michigan State Medical Society. The fee for membership is a nominal one of \$2.00. All members of the State Society are invited to join, and their presence will be exceedingly welcome at all the clinics and demonstrations whether they are members or not. The program will be found in full in the March number of the Journal of the Michigan State Medical Society.

EXPERIMENTAL MEDICINE AND SURGERY

When Hurley Hospital is completed, when our new medical auditorium is furnished, and when our medical library is properly housed, we will have many things which will make for medical progress in Flint. There is still one thing that is urgently needed and which would prove of inestimable value. We should have somewhere near Hurley Hospital, a proper institute for experimental medicine and surgery. There should be a building with sanitary quarters for experimental animals, an aseptic operating room, as well as laboratories for chemistry, bacteriology and pathology.

It is desirable that our young surgeons should acquire skill and dexterity by doing dog surgery. All present day masters of this art have acquired much of their skill in this way. Dr. Chevalier Jackson perfected himself in the technic of bronchoscopy by using dogs. Everyone knows of the thousands of lives he has saved by his unusual skill. In teaching this subject at Philadelphia, he makes use of dogs. At present, courses in dog surgery are given only at large medical centers and large fees are charged for such instruction. This work could be done just as well at home. Surgery is not the only specialty to be benefited by such a place. Physiology and pharmacology depend just as much on such methods for progress.

A contribution of \$50,000 from one of Flint's many millionaires would make such an institution possible. No one can estimate the returns possible from such an investment for no one can set a value on a human life.—From the Genesee County Medical Bulletin.

Chickenpox may be added to the list of diseases that can be prevented by vaccination. Dr. Jean V. Cooke of the Washington University School of Medicine at St. Louis, Mo., has reported to the recent meeting of the American College of Physicians that inoculation of exposed children with serum from convalescent patients has successfully prevented cases of both chickenpox and measles. Though the former is sufficiently mild a disease not to require general protective measures, its appearance in epidemics in institutions causes considerable difficulty, especially in the very young children affected. The preventive treatment for measles, said Dr. Cooke, should be concentrated on account of the danger of complications on infants and young children under five years of age. Results with this method show, he stated, that almost 90 per cent of children given convalescents' serum during the first week after exposure fail to develop the disease.—Science Service.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.
Secretary Michigan State Medical Society

Four Day Medical and Surgical Clinic *Detroit, May 14, 15, 16 and 17*

PRELIMINARY ANNOUNCEMENT

We are very elated over being able to submit to our members a preliminary announcement of the Four-Day Medical and Surgical Clinics that will be conducted in Detroit, May 14, 15, 16 and 17. This Clinic is being tendered to the profession by reason of the collaboration and activity of the Wayne County Medical Society, the Alumni of the Detroit College of Medicine and Surgery, and the Graduate Department of the School of Medicine of the University of Michigan. It will be the first Clinic given under the new Post-Graduate Instruction program of the Michigan State Medical Society.

We have no hesitancy in stating that this will be the biggest and best medical and surgical clinic ever held in Michigan. As such it merits the support of the profession of the state. There is not a member who can afford not to attend. It presents an opportunity to obtain present-day theories and practices imparted by a most commanding list of recognized clinicians and authorities. These speakers are virtually bringing their clinics to Detroit, enabling you to hear and see them during a period of four days for a minimum expenditure of time and money. We urge you note the dates and plan to be present. Detailed announcements as to subjects and time will be imparted in the May number of *The Journal*—watch for it.

It is not amiss at this time to comment upon the fact that this announcement is part of the Post-Graduate Instruction Program of our State Medical Society. For more than ten years the State Society has concerned itself with providing educational programs for its members. Commencing with clinic teams that were organized and available for County Society meetings there followed regional meetings which in turn were succeeded by the Councilor Dis-

trict Conferences. To these there were initiated the University Hospital Clinics. During the past two or three years the matter of a Post-Graduate School at the University was suggested and several conferences were held. These resulted in the announcement made last fall of the establishment of the Department of Post-Graduate Medicine by the Regents.

It is therefore apparent that your officers are gradually developing a program and policy that will provide within the boundaries of our state educational opportunities for our membership. It is intended to make available clinics and study courses that will enable every member to obtain educational opportunities equal to any in this country. It is to be a feature of our organizational existence. If one refers again to the minutes of the last meeting of the Council information will be acquired as to the plans that are being executed for the present year. This Detroit Clinic is the opening number—others are to follow. In addition plans are about ready, and will be announced in May, for an extended series of Councilor District Conferences. Further comment will accompany such announcement. In the meantime plan to be in Detroit May 14-18 when the following clinics will be conducted:

Alexander, John, M. D., Department of Surgery, University of Michigan.

Bagg, Halsey J., Ph. D., Memorial Hospital, New York City—"X-ray and the Alteration of the Germplasm."

Blain, Alex. W., M. D., Jefferson Clinic, Detroit—"Direct Blood Transfusion."

Birkelo, C. C., M. D., Detroit.

Campbell, Alex. W., M. D., Grand Rapids, Michigan.

Corbus, B. R., M. D., Grand Rapids, Michigan—"The Argument for the Medical Treatment of Peptic Ulcer."

Coughlin, Wm. T., M. D., Department of Sur-

gery, St. Louis University—"The Modern Treatment of Trigeminal Neuralgia Major and Its Cure Under Local Anesthesia."

Crile, Geo. W., M. D., Cleveland, Ohio—"Factors Which Control the End-Results of Operations on the Gall-Bladder and Thyroid Gland."

Crotti, Andre, M. D., Columbus, Ohio.

Davis, James E., M. D., Detroit College of Medicine and Surgery.

Dickinson, G. K., M. D., Jersey City, N. J.—1. "Some Points about the Liver, Particularly in its Relation to Surgical Work"; . "The Education of the Physician."

Furniss, Henry D., M. D., New York City—"Post-Operative Renal Infection."

Hedblom, Carl A., M. D., Chicago, Illinois—"The Surgical Treatment of Pulmonary Tuberculosis," including a clinic.

Hickey, P. M., M. D., University of Michigan.

Kellogg, Foster S., M. D., Boston, Mass.

King, James E. M. D., Buffalo, N. Y.—1. "Carcinoma of the Cervix"; 2. "A Discussion of the Pathology of the Appendix."

Kiefer, Guy L., M. D., Lansing, Michigan, Commissioner of Health.

Lower, William E., M. D., Cleveland, Ohio.

Maccallum, A. B., M. D., Faculty of Medicine, University of Western Ontario—"The Recent Advances in Knowledge of the Fat Soluble Vitamines."

Marshall, W. H., M. D., Flint, Michigan.

McKean, Richard M., M. D., Detroit, Michigan.

McPherson, Ross, M. D., New York City.

McVicar, Chas. S., M. D., Mayo Clinic, Rochester, Minn.

Mendenhall, A. M., M. D., Indianapolis, Ind.

Miller, Harold A., M. D., Pittsburg, Pa.

Martinez, D. R., M. D., Pittsburg, Pa.

Mortensen, M. A., M. D., Battle Creek.

Porter, Miles F., M. D., Fort Wayne, Indiana—"Ileus."

Rucker, M. Pierce, M. D., Richmond, Va.—"The Use of Lipiodol in the Early Diagnosis of Pregnancy."

Sloan, E. P., M. D., Bloomington, Ill.—"Two Kinds of Toxic Adenoma," with remarks on our diagnosis and treatment.

Smith, Richard R., M. D., Grand Rapids, Michigan.

Speidel, Edward, M. D., Louisville, Ky.—"Obstetrical Emergencies in the Home."

Stone, Wm. S., M. D., Memorial Hospital, New York City—"Malignancy."

Watkins, John T., M. D. and Cumming, R. E., M. D., Detroit, Michigan—"Significance of Ureteral Stricture in Relation to Abdominal and Other Symptoms," (Illustrated.)

DR. JONES

Upstairs

We have read anew, in a contemporary journal, the narrative that to us has conveyed a tender pathos:

"What of the country doctor?" you ask.

"I haven't forgotten him. Whenever the country doctor is mentioned, I think of staunch old Doctor

Jones. Maybe his name wasn't Jones. It might have been Miller, or Brown, or Smith. But what does the name matter, for the world did not even know him when he lived?

"Old 'Doc' Jones was a village doctor in Ohio. With his old mare and rusty buggy he scoured the whole countryside about, through spring mud that slushed up to his axles, through snow, through rain, and scorching days of mid-July. Sometimes he collected a dollar for a visit. Just as often the dollar went down in the old doctor's book. He never claimed to be much of a business man, and his landlord swore that 'Doc' Jones was a full year behind in his rent.

"Many a broken bone old 'Doc' Jones set while a gaping farm hand held the kerosene lamp for him to see by. Many a blizzard he braved with that tired, sleepy mare to bring a new baby to town. Many a shabby account book he filled with many an entry of unpaid fees, only to toss the book eventually into a cluttered drawer to let the dust of years seal it forever. And after forty-seven hard years of practice he died—at his desk, his hoary head cradled in his arms while he snatched a mite of sleep in his dingy little office on the second floor.

"The whole village, and folks from the hills and valleys for twenty miles about, turned out for the funeral. A few of those who knew raised a little fund among them to pay for the cemetery plot and the plain oak coffin. The fund wasn't sufficient to buy a monument.

"But after the others had all gone, and the humble grave had been filled, one mourner lingered there alone. He was the new young doctor who recently had come to the village. He stood, head bared and bowed, before that unmarked burial spot.

"Presently he left to return with a weather-beaten, faded bit of oblong board on which a message in dim gold letters was still distinguishable. It was the sign which for almost a half century had directed the ailing and sick to the office on the second floor. And that, as a monument, he placed reverently on the mound of fresh earth:

Doctor Jones

Upstairs

What finer epitaph could any man want? Who could write a nobler elegy?

So has the profession ever served—service rendered in that spirit, unmindful of monetary rewards or returns. Disregarding the economic problems and shifting scenes of social and business life has no doubt been a potential factor causing much of our unpreparedness to cope with movements that have encroached upon present day practice. We are not advising relinquishment of service ideals—we urge rather that we cling to those ideals with greater tenacity, exemplifying them as did Dr. Jones. Let it never be charged that we worship wholly at the shrine of dollar idolatry and that the size of our golden calf attests to our capabilities. Service must come first—efficient service—and then having so served we are rightly justified to monetary rewards and are justified in

insisting and demanding that we be paid in full and promptly.

We are digressing from what we started out to write—so back to our text. As a profession we are ready to serve and to be able to serve most efficiently. We individually and collectively are expending time, money and energy in remaining abreast of medical progress. Our society and our county units are holding meetings, conducting study courses in order that our service may reflect the greatest efficiency. We are also seeking to enlighten the public as to the truths of scientific medicine in order that the individual may know how to prevent as well as relieve physical afflictions. Having done so we feel that we have placed the responsibility of securing such service upon the individual and that as a rule, he has no right to shirk that responsibility by expecting that medical advice and attendance be provided him by clinics, welfare chest funds, or the earnings of endowment funds of hospitals unless he be in abject destitute circumstances. He has been lead to so expect and so receive because of the many free clinics that have been established most inadvisedly and often with the aid and approval of doctors individually or in small coteries. Clinics have multiplied and multiplied so that there is no denying that a veritable clinic evil and problem exists—an evil that is imposing upon doctors, a problem that is undermining individual independence and responsibility. The individual is responsible for his taxes, food, clothes, education, home; then why should he not be equally responsible for his health and physical welfare? He pays for advice and service in matters of law, finance, architecture, engineering, farming and similar professions and trades, why single out medicine or his physical well being and say to the individual—we, a clinic, will relieve you of that responsibility and expense. In religion, or soul welfare he receives nothing free—he pays to be baptized, receive religious instruction, to be married, to go to church on Sunday and to be buried—why should he not reasonably pay for medical advice and service? Why should clinics assume that responsibility for the individual?

We therefore hold that the last straw has been added to our burden and that from now on a concerted movement must be directed to curb and lessen this clinic evil and abuse. To that end we are purposing to direct some of our study, thought and effort. We invite suggestions and guidance. We shall have more to say just as

soon as we have completed certain investigations and compiled certain facts.

DUES

Under provision of our by-laws and also by resolution of the House of Delegates all members whose dues are unpaid on April 1st are placed on the suspended list. To prevent such suspension we urge County Secretaries to exhibit increased effort to remit their members' dues by April 1st.

AID

During the month a letter has been addressed to every County Secretary requesting that he impart the outstanding problems of his Society and members and to indicate wherein we may be of assistance in solving these problems. We can help only when we know your needs. It was the purpose of the Council in relieving the Secretary of the Editorial duties that more thought and time might be devoted to organizational work. That is our purpose, still we cannot so serve unless you indicate the avenue. So please let us have your recommendation.

THAT YOU MAY KNOW

The enforcement of our medical practice laws has ever been a subject of much misunderstanding. The following letter from the Detroit Department of Health's special investigator imparts pertinent information. Pending the enactment of new legislation would it not be the apparent duty of health officers elsewhere to follow the Detroit plan? Is not an incompetent cultite and pseudo-doctor as great a health menace to a community as is chicken pox or impure milk? We ask you?

March 7, 1928.

Dr. Frederick C. Warnshuis, Secretary:

I am just in receipt of your letter of inquiry regarding the investigations of violations of the medical act in Detroit and requesting information as to how we operate.

In the introduction of the registered nurses as public health nurses in the field it was found that many complex cases came to their attention which because of their complexity needed special attention. The division of Special Investigation of the Department of Health was then organized and such special cases were referred to this division. I was made director and have functioned as such ever since.

It soon became apparent that among the various other cases that came to our attention were those regarding the illegal practicing of medicine and since then we have become thoroughly con-

vinced that the eradication of the quack and the illegal practitioner is a proper function of the Department of Public Health, as much, if not more so, than any other branch of public health activity. We believe it is the duty of the health department to see that the public receives proper medical attention not only in the treatment of contagious diseases but in every other case, so we took upon ourselves the prosecution of illegal practitioners as one of the functions of this office.

At first we limited our services to people who complained about treatment they had received from various quacks and illegal practitioners. We saw that proper warrants were drawn up; that the warrant was sworn to properly; that the illegal practitioner was arrested; that the case was properly prepared before going to court; set in during the trial, and assisted the prosecuting attorney in the prosecution, the same as any police officer in the prosecution of any other criminal.

The prosecuting attorney of any county, of course, will prosecute any complaint that comes before him but he is usually without the machinery to make investigations, prepare evidence, dig up the witnesses and properly prepare the case for prosecution. In other criminal cases this is usually done by the police department or sheriff's office. We felt that inasmuch as the eradication of the illegal practitioner of medicine was a function of the health department, we should assist the prosecutor in the preparation and prosecution of these cases. This has been done in Detroit since my appointment to the office.

It soon became apparent that there were many practicing against whom no complaint was made due to the fact that in some cases the people were ignorant and in others no serious damage had been done to the patient, but who were still a menace to public health. We then found it necessary to send out people who would act as patients and, of course, it was necessary to furnish them with sufficient funds to at least pay for the initial treatment. These investigators were usually employees of the health department working in some other division.

In my first campaign against chiropractors operating illegally in Detroit, I ran up a bill of about \$75.00 which I presented to the county for payment, the same as any other investigation made by the police department of the City of Detroit, but which they refused to pay. The City of Detroit, through the controller, declared that it was a matter for the prosecuting attorney and that the City of Detroit could not appropriate any money for these investigations and prosecutions. I then had a conversation with Dr. Frank Kelly of the Wayne County Medical Society and he assured me that the Society would be glad to furnish the funds for the prosecution of illegal practitioners in Detroit and since that time they have from time to time furnished these moneys.

I am of the opinion that the State Board of Registration in Medicine, who are charged with the responsibility of licensing and enforcing the law, should be furnished with a sufficient number of investigators and also with moneys for the proper enforcement of the Medical Practice Act within the State of Michigan, as I believe that outside of Detroit, perhaps Grand Rapids and a few of the larger cities, the health departments would be unable to secure sufficient help to carry on these investigations.

The cases reported in the Wayne County Bulletin are only a part of the cases which were prepared and prosecuted by this office during the

past year. Many cases came to us through patients who had received injurious treatment and who complained to us.

If there is any other phase of this work about which you would like information, I will be glad to furnish same upon request.

Very sincerely yours,

John F. Roehl,
Special Investigator.

WAYNE'S TELEPHONE DIRECTORY LISTING

There is evidently considerable misunderstanding regarding the funds that were expended to aid the Wayne County Medical Society to publish a list of its members in the Detroit telephone directory. In order that the facts may be clear we are publishing a copy of a letter that was sent to Councilor Urmston for the information of the members of the Bay County Society:

March 7, 1928.

Dr. Paul R. Urmston, Councilor:—

Davidson Building,
Bay City, Michigan.

Dear Dr. Urmston:—

Thank you for your letter of March 6th which cites the specific instances that caused the Bay County Society to voice their protest relative to certain expenditures of our State Society and make particular reference to the contribution given to the Wayne County members for defraying the expense of listing their names in the telephone directory, and also a contribution to the clinical bulletin of Wayne County. I am quite sure that your members are not in possession of the absolute facts and that when these facts are presented to them that they will glean a new viewpoint of the situation. I shall try to impart these facts in this letter.

If your members will refer to the November Journal on page 687 they will note the official action of the Executive Committee, and then if they will refer to page 690 of the same issue and read the editorial on "Medical Guidance," particularly the latter part of the editorial, further information will be imparted.

Now, the facts are these—that we have approximately 1,400 members in Wayne County who have paid their annual dues of \$10.00 per member causing the Society to receive an annual collection of dues from Wayne County of \$14,000.00. As you know for the past four years we have been conducting a series of Post-Graduate Conferences and provided speakers for County Society meetings, outside of Wayne County. This has been part of our educational program and with the approval of the House of Delegates an appropriation of a little better than \$6,000 was made to defray the expenses of speakers, rental of halls, traveling expenses, etc., of these conferences and special meetings.

In checking over our financial expenditures it is definitely shown that out of the annual dues paid by a member, the members outside of Detroit have been receiving approximately \$2.00 per member from this educational and post-graduate program. During these four years we have ex-

pended no money in Wayne County. All our expenditures have been without the boundaries of Wayne County and for the benefit of members in the other counties of the state and the Upper Peninsula. I have during that period of time felt several times that we owed something to Wayne County and the members, who were paying the same dues as the members throughout the state, but were not receiving these special privileges and benefits that were being accorded to the members of the state. Upon two or three occasions I appeared before the Wayne County Medical Society Council and asked them how the State Society might be of assistance to the members of Detroit. The reply had been invariably, "it is not what the State Society can do for its members in Detroit, but what more can the members in Detroit do for the State Society and the members throughout the state." This has been a most admirable spirit and has characterized the attitude of Wayne County to the rest of the profession in the state during the past four years.

Now last fall under the regime of the new officers of the Wayne County Society an appeal was made to the State Society for some assistance and help in a plan that they were desirous of instituting; namely, the listing of its members in the Detroit telephone directory. Please bear in mind that during the past four years we received some \$56,000 from the profession in Detroit from which they received only the Journal and the medical legal protection, just as do all other members. Now they were in need of a contribution or some assistance and in reviewing the above facts, and also taking into consideration the fact we were expending nothing in Detroit, but were expending approximately \$2.00 per member over and above the medical legal protection and the Journal throughout the state; also considering that because of a peculiar situation in Detroit this listing would be of material benefit to the entire profession in Detroit, the Executive Committee and the Finance Committee of the Council felt that a contribution of \$1.50 per member for Wayne County would not be unreasonable and would reflect our activity in Wayne County in a desirable way. The Council therefore took this action and made a contribution of approximately \$2,000 to Wayne County to defray this telephone listing expense.

I think that if you reflect and the members of the Bay County Society also reflect, that \$2,000 spent in Wayne County in a period of four years is a very small return to the members who have paid to the Society some \$56,000. This is by no means a positive and permanent contribution, but as was definitely stated was a temporary assistance. Had we treated the members in Detroit the same as we have done with the other members throughout the state and provided clinical material, speakers and post-graduate meetings, our expense in Detroit during these four years would have been in the neighborhood of \$12,000 whereas we have only expended \$2,000. Does not this appear to be just and fair?

Now let me add this, that by reason of this listing in the Detroit telephone directory of reputable members of the profession who are members of Wayne County Medical Society and the announcing of this plan to the profession of Detroit, caused an increase in Detroit membership of something like 300 members so that we received a little over \$3,000 more in dues this last year than we received from Detroit before; because these new members have been ones who

were cold and not affiliated but when they saw the benefit of this listing they hastened to join the Wayne County Society so that the State Society received approximately \$3,000 more in funds from the Wayne County Society than we had in previous years and we only expended something like \$2,000. So in the final analysis the State Society is a little better than \$1,000 to the good on the plan. May I not ask you if this is also not a desirable feature and justifies the action taken?

In regard to the Bulletin contribution—this must not be mistaken or confused with the Bulletin of the Wayne County Medical Society. The Bulletin of the Wayne County Medical Society is entirely a separate proposition and the expense of editing is defrayed by the Wayne County Society just the same as the bulletins of the Kent County Society, the Genesee County Society and some of the other counties who publish a bulletin. The bulletin referred to, for which a contribution was made, is the Clinical Bulletin published under the auspices of the hospitals of Detroit by the Clinical Committee of the Wayne County Medical Society. This bulletin is nothing more than a listing of daily operations, clinics and medical meetings that are being held in the several hospitals, by special societies and groups of doctors.

The bulletin imparts this information for the benefit of the members in Detroit and also for visiting doctors from the state who may be in Detroit on business or for some clinical work. It enables a doctor to know what clinics are being held that day, and what meetings are being held so that he may determine how he may best spend his time at the various hospitals and clinics in Detroit. The expense of this bulletin is defrayed by contributions made by the hospitals of Detroit and some of these clinics, but last year they had a deficit because of the expense entailed in the printing and distribution of this bulletin and it was to help cover this deficit that the contribution was made. The Executive Committee and the Finance Committee rightly considered that this was justified as, part of our program of post-graduate work.

Unless one is familiar with the facts he does not realize just how many doctors visit Detroit for a day or a week, who are anxious to avail themselves of the clinic work that is going on. Previous to the publication of this bulletin they encountered much difficulty in finding out what clinics were being held, what work was being done and so they lost much time and also missed some special work because they were unable to obtain the information. This information is now obtainable through this bulletin which is free to any doctor and may be secured at the Wayne County Medical Society headquarters as well as at the various hospitals in Detroit and is available by five o'clock in the afternoon covering the following day's work.

It must be apparent that this is an educational measure that may well be supported by the State Society, inasmuch as doctors throughout the state benefit by it.

I trust that the above explanation places a new light upon the situation and will impart to the members in Bay County more accurate information, and after having secured this information I am still wondering if it is their desire to officially voice their protest and record it in the resolution that was sent to me.

With personal regards, I am

Yours very truly,

F. C. Warnshuis, Secretary.

WAYNE COUNTY

The following is a tentative program of the Wayne County Medical Society for the month of April:

April 3—General meeting. Address, "Basic Sciences as a Prerequisite for Medical Registration." W. C. Woodward, M. D., Executive Secretary, Bureau Legal Medicine and Legislation, American Medical Association.

April 10—Medical Section. Joint meeting with the Northern Tri-State Medical Society. "Post Operative Complications." Elliott C. Cutler, M. D., Western Reserve University, Cleveland, Ohio. Statler Hotel ball room, 8:30 p. m.

April 17—General meeting. Historical papers.

April 24—"Why a Medical History of Michigan", C. B. Burr, M. D., Flint, Mich.

Surgical section, "Gynecological Patients", Arnold Stermendorf, M. D., New York City.

MONROE COUNTY

At the October meeting of the Monroe County Medical Society, the following officers were elected: President, H. L. Meck, Dundee; Vice-President, D. C. Denman, Monroe; Secretary-Treasurer, Florence Ames, Monroe.

Monroe County has been fortunate in having some very interesting and practical addresses at recent meetings. On October 21, 1927, Dr. Wm. Fowler, of Detroit, spoke on "The Tonsil Question Again and Common Colds Too Common."

On November 17, 1927, Dr. Don M. Griswold, Deputy Commissioner of Public Health, presented the subject of "Scarlet Fever Immunization." January 19, 1928, Dr. H. H. Cummings of Ann Arbor talked about "Some Common Complications of Obstetrics."

Monroe County Society has several new members: Dr. L. J. Rubley, of Monroe, transferred from Lenawee County, and Doctors Sara Long, R. T. Ewing, L. C. Blakey of Monroe, and Dr. J. H. McMillin of Dundee, voted into the Society January 19, 1928.

Florence Ames, M. D., Secretary.

LENAWEE COUNTY

The regular meeting for the month of February was held at Adrian on Thursday the 16th. The members met at the Lenawee Hotel for dinner at 6:30 p. m. There were 24 present. President Hammel was absent, being in Chicago, so the scientific meeting was in charge of Vice President Howard Heffron. Dr. Russell L. Mustard of the University of Michigan Hospital was introduced as the speaker of the evening. Dr. Mustard gave a very fine talk on the treatment of fractures of the femur and the radius and ulna. He illustrated his talk with lantern slides. He gave very clear explanations of the technic of the different procedures now in use at the University Hospital for the management of these types of acute fractures.

The April meeting will be held in Adrian at the Lenawee Hotel. Dr. James E. Davis, Pathologist at the Detroit College of Medicine and Surgery will be the speaker and will talk on "Inflammation of the Kidney."

The May meeting will be held in Hudson. This will be the first meeting held in Hudson this year and will be at the new Hospital. Dr. E. G. Mar-

tin of Detroit, will be the speaker at the scientific meeting.

R. G. B. Marsh, Secretary.

NEWAYGO COUNTY

The annual meeting of the Newaygo County Medical Society was called at the Kimbark Inn, at Fremont, Michigan.

After luncheon the meeting was called to order by the President, Dr. Drummond. The minutes of the last regular meeting were read and approved.

Dr. B. F. Black of Holton was then unanimously voted to membership in the Society. A communication from Dr. LeFevre, district councilor, relative to time and place for holding the next P. G. Medical Conference was read, and a motion was made by Dr. Geerling, supported by Dr. N. DeHaas that the Secretary be instructed to notify Dr. LeFevre that the Society would be pleased to have the next P. G. Conference at Fremont about the first week in June of 1928, and the motion was carried.

The Society then proceeded to the election of officers for the ensuing year with the following results:

President—Dr. H. R. Moore, Newaygo, Mich.

Vice-President—Dr. J. C. Branch, White Cloud, Mich.

Secretary-Treasurer—W. H. Barnum, Fremont, Mich.

Committee on Medical Defense—Dr. N. DeHaas, Fremont.

Delegate to Michigan State Medical Society—Dr. P. Drummond, Grant, Mich.

Alternate—Dr. B. F. Black, Holton, Mich.

Members present, nine.

W. H. Barnum, M. D., Secretary.

OAKLAND COUNTY

Dr. Don M. Griswold, deputy commissioner of the Michigan Department of Health, addressed the Oakland County Medical society at its regular monthly meeting at Royal Oak Methodist Episcopal church. His topic was "County Health Units."

Dr. Griswold traced the gradual evolution in the practice of medicine in the last 30 years and pointed out the growing importance of preventive work.

He outlined various activities of the State Health Department and compared the system in Pennsylvania—with a centralization of authority—with Michigan where the policy is decentralization by developing strong city and rural health departments.

Rural health work can best be carried on by taking the county as a unit for organization purposes and developing well balanced public health programs for the rural districts, he said.

While county health work in Michigan is new, it has been established in other states for a considerable period of time. The first county unit was established at Yakima Valley, Wash., in 1908, following an epidemic of typhoid fever.

Health demonstrations, Dr. Griswold contends, should be carried on with the co-operation of the local medical profession rather than by outside agencies. In his address he mentioned the work

of the full-time county health organizations in the Mississippi flood area in 1927. Owing to the organized service rendered in the stricken area many epidemics which were feared did not materialize.

In conclusion the speaker stated that only the backing and co-operation of the county medical societies will insure the success of a county health unit.

Two physicians were elected to membership in the county society. They are Dr. Ethan B. Cudney, Pontiac, and Dr. H. E. Boice, Farmington. —Pontiac Press.

HOUGHTON COUNTY

Regular monthly meeting of Houghton County Medical Society was held Tuesday evening, March 6, 1928, at 8:30 o'clock at the Douglass House, Houghton, Mich.

Dr. Alfred Labine, vice-president presided in absence of the president.

Fifteen members were present.

Dr. A. D. Aldrich read a very interesting paper on "Angio-neurotic Edema", with personal experiences. Dr. Aldrich having been a victim of this malady, gave us some very interesting information regarding the symptoms and results of his treatments. Latest literature considers the etiology to be classed with other allergic diseases. The discussion emphasized point that probably "fatigue" was an important factor in precipitating an attack. It was also pointed out that the treatment of condition was pregnant with possibilities as to giving a clue to its etiology. The fact that Adrenalin chloride will relieve an attack, leads one to believe that probably a malfunction of this gland would be a factor in causing an attack. It was the consensus of opinion that one factor in the etiology of this condition was probably a bio-chemical condition, dependent upon the mal-function of the endocrine system.

T. P. Wickliffe, Secretary-Treasurer.

KENT COUNTY

The Annual Meeting and dinner of the Kent County Medical Society was held at the Peninsular Club, Grand Rapids, Michigan, December 14, 1927, and the following officers for the ensuing year were elected:

Dr. Harrison S. Collisi, President.

Dr. John Wenger, Vice-President.

Dr. John M. Whalen, Secretary-Treasurer.

The delegates to the Michigan State Medical Society of the year 1927 and the Defense League Representative, Dr. George L. McBride were re-elected.

Since the Annual Meeting there have been held five regular meetings at which a variety of scientific papers have been presented, principally by members of our own local organization, but we also have had the opportunity and pleasure of entertaining Dr. Alfred LaFerte of Detroit, who spoke on "Fractures of the Long Bones", Dr. O. P. Kimball of Cleveland, Ohio, who reported his impressions as to the Universal use of Iodized Salt in the Prophylaxis of Goitre, and Dr. E. I. McKesson of Toledo, Ohio, who discussed from all angles the subject of Anaesthesia.

Great interest has been shown in all these sci-

tific meetings, as evidenced both by the attendance and the discussions following the presentation of these papers, and the ensuing year at its outset promises to be very successful from all standpoints.

J. M. Whalen, Secretary-Treasurer.

GENESEE COUNTY

The meeting of Genesee County Medical Society was held February 8, 1928, at the Hotel Dresden, Flint, Mich., with President McKenna in the chair. Minutes of the last meeting read and approved.

Dr. Blanche Weill announced that Dr. Alfred Adler would be in the city in April. She proposed that two or three groups interested in Psychological problems jointly contribute toward financing a lecture by him on some phase of adult psychology. Dr. Malfroid moved that the Genesee County Medical Society contribute \$25 as their portion of the contribution. Motion seconded and carried.

Letter from Dr. Warnshuis concerning activities of the Gorgas Memorial read by the secretary.

Following explanations and discussions by Dr. Griswold of Act 306 of Public Acts of 1927, Dr. Benson moved that the Act be indorsed by the Genesee County Medical Society.

Meeting adjourned.

M. S. Chambers, Secretary.

Genesee County Medical Society held its regular meeting February 22, 1928, at the Hotel Dresden, Flint, Mich., with President McKenna presiding. Minutes of the last meeting read and approved.

A committee to investigate furnishing the new hospital auditorium was appointed by the president as follows:

Dr. M. S. Knapp, Chairman; Dr. H. E. Randall, Dr. H. Cook, Dr. G. Briggs, Dr. E. G. Dimond.

Dr. George Burr of Detroit gave a paper on "Renal Tuberculosis."

Meeting adjourned.

M. S. Chambers, Secretary.

HILLSDALE COUNTY

The Annual Meeting of the Hillsdale County Medical Society was held at the Lantern Tea Room, Hillsdale, January 19, 1928, President Dr. H. C. Miller in the chair.

After a fine dinner and the reading of the minutes, the president introduced Dr. R. L. McLain of Quincy, who gave a timely and very instructive address on "Medical Legislation," pointing out the need of more medical men in our legislature, of which he has been an honored member, and the difficulties they have to meet in securing needed legislation. Discussed by Dr. Sawyer, after which Dr. McLain was cordially thanked by the President for his fine and needed address.

Dr. Fenton then gave a brief report of the "Race Betterment Conference" at Battle Creek, January 2 to 6, 1928.

Dr. S. B. Frankhouser gave a most interesting account of his recent visit to Chicago out at the aviation field and his meeting with Mayor Thompson of that city.

It was moved, supported and carried "That the

annual dues of this Society hereafter be \$12.00 for State and County, \$2.00 to remain in the local treasury."

Moved, supported and carried "That the present corps of officers of the Society be retained for the ensuing year."

Moved, supported and carried "That Dr. Bion Whelan be made an honorary member of the Society."

Moved, supported and carried "That C. T. Bower be made delegate to the State Society with Dr. G. R. Hanke as Alternate."

Adjourned.

D. W. Fenton, Secretary.

MUSKEGON COUNTY

At the regular monthly meeting of the Muskegon County Medical Society, held in the Community Room of the Union National Bank, the following business was transacted.

The Society voted unanimously to approve of the action taken by the Wayne County Medical Society in passing a resolution disapproving of the proposed legislation known as act 306 P. A. 1927 whose purpose is to establish full time County Health Officers in the various counties.

At a previous meeting it was brought to the attention of the Society that some of the industrial plants in Muskegon were allowing optometrists to examine the eyes of employees during business hours in the factory. A committee was appointed to bring to the attention of the factory heads that the industrial physicians already in the factory organizations are better able to make these examinations if they are thought to be necessary.

Dr. Colignon, chairman of the committee, reported that four factories which had discussed the matter with him had no intention of employing anyone but physicians and surgeons to make examinations.

Dr. Bloom reported that the committee on physical therapy had met with the director of the Y.M.C.A. and a competent masseur had been engaged to perform massage under the direction of members of the medical profession. Membership in the Y.M.C.A. is not necessary in order to make use of the services of the masseur.

Dr. P. S. Wilson was appointed chairman of a committee to represent the Society at the tuberculosis clinic to be held at the Muskegon County Sanitarium under the auspices of the State Tuberculosis Society, March 1.

Dr. F. Garber was appointed chairman of a committee of three to write an advertisement of the Society to appear in the special edition of the Muskegon Chronicle to be issued in celebration of the completion of the new Chronicle building. The Society voted to appropriate \$250 for the advertisement.

The Society voted to appropriate \$25.00 to sponsor a booth at the Boy Scouts Exposition in the Muskegon Armory February 23, 24, 25. The booth is to depict some form of first aid work.

The Society voted unanimously to invite the Oceana County Society to attend the meeting on April 13th, at which Dr. Reuben Peterson, Professor of Obstetrics at Ann Arbor, will be present.

Dr. D'Alcorn read an interesting paper on the comparative costs of medical service and particularly obstetrical service, showing the cost of

maternity under various conditions in various places.

The meeting adjourned at 10:45 p. m.

BERRIEN COUNTY

The Berrien County Society had a very good meeting in Niles on the 23rd of February.

Doctors Greene and Bryant of the Cass County Society were present in response to an invitation from the Berrien County Society to affiliate with them. It was their opinion that Cass County would get together and join with us, so we will probably be known after a while as the Berrien-Cass County Medical Society.

The letter from Dr. Warnshuis in regards to the Gorgas Memorial activities was read, and a motion made and seconded that the Berrien County Society support the State Society in their opposition to this movement. This was unanimously carried.

The resolution from the Wayne County Society and the letter from Dr. Kiefer (concerning the new county health departments) were not acted upon. On motion the subject was held over until further information was obtained.

Announcement was made of the post-graduate conference to be held in this district in May. This meeting will be held either at the new Whitcomb Hotel in St. Joseph if available at that time, or at the new Congregational church in Benton Harbor. Arrangements and program will be announced later.

The society will entertain at dinner on March 12th the following members from the University of Michigan staff: Doctors Cabot, Warthin, Hickey, Coller and Kahn. They will probably present a symposium to Berrien County men.

Papers given at the Niles meeting were by Doctors Wilson and Giordano, of South Bend, Ind. Dr. Wilson attended the International Goitre Clinic at Switzerland last summer, and gave a very interesting paper on "Toxic Goitre." Dr. Giordano discussed "The Pathological Findings in the Thyroid Following Iodine Medication." Discussion of these papers was opened by Dr. Frank King of Benton Harbor, and Dr. Gillette of Niles.

Both papers and the discussion were extremely interesting and of value to all present.

Committee appointments were announced by Dr. Strayer, the president, as follows:

Board of Censors, Doctors Sowers, Westervelt and Giddings: Membership Committee, Doctors Howard, McDermott and Rutz. Executive Committee, Doctors Gillette, Dunnington and Tonkin. Grievance Committee, Doctors Henderson, Rosenberry and Telkie. Program Committee, Doctors Snowden, Witt and F. A. King. Tuberculosis Committee, Dr. C. A. Mitchell.

W. C. Ellet, M. D., Secretary.

MARQUETTE-ALGER COUNTY

The Marquette-Alger County Medical Society held its annual meeting December 30th, 1927, at which time officers were elected for the year 1928. The following officers were elected:

President—Dr. A. W. Hornbogen of Marquette.

Vice-President—Dr. W. A. Corcoran of Ishpeming.

Secretary-Treasurer—Dr. R. L. Finch of Marquette.

Delegate to the M.S.M. meeting—Dr. H. H. Loveland of Republic.

Alternate delegate to M.S.M. meeting—Dr. N. Robbins, of Negaunee.

Dr. F. R. Schemm of Big Bay was unanimously elected to membership. It was unanimously carried that the Marquette-Alger County Medical Society strongly recommend to the delegates of the State Medical Society the re-election of Dr. R. A. Burke of Palmer, as Councilor for the 12th district.

The regular meeting date was definitely fixed as the third Tuesday evening of each month.

The Society was invited to hold its January meeting at the Marquette Branch Prison Hospital.

At the January meeting which was held at the Marquette Branch Prison on the 17th, the new officers were installed. The members present, numbering 23, were recipients of a fine white-fish dinner which was followed by an inspection of the prison conducted by Warden J. P. Corgan. The meeting was then called to order and the following program given: A paper by Dr. L. L. Youngquist on "Basal Metabolism," with a demonstration of the Sanborn Apparatus; a paper by Dr. J. E. Bellas on "Chronic Duodenal Ileus" and a paper by Dr. R. L. Finch on "Myocarditis." Dr. Finch also presented a few interesting clinical cases consisting of a case of Chronic Endocarditis; a case of Lupus; a case of lacerated eye-ball, a case of post-operative hyperthyroidism, which also was discussed by Dr. A. W. Hornbogen. Several pathological specimens were shown consisting of thyroids removed and a heart showing vegetative endocarditis.

Dr. Rowley of Lansing, State Psychiatrist, was a guest and made a few remarks.

Dr. Van Riper, as chairman of the Morgan Heights Tuberculosis Sanitarium board of directors, invited the Society to hold its regular meeting at the Sanitarium February 21st, 1927.

The president, Dr. A. W. Hornbogen, appointed a program committee as follows:—

Dr. Paul VanRiper, Dr. A. W. Hornbogen as ex-officio member.

Meeting then adjourned.

Russell L. Finch, Secretary.

The regular February meeting of the Marquette-Alger County Medical Society was held on the 21st, at the Morgan Heights Tuberculosis Sanitarium. Dr. S. Lojocano, superintendent of the sanitarium conducted the members through the new addition which has recently been opened and which is modern in every way. This was followed by a very delicious chicken dinner.

Dr. F. McD. Harkin of Marquette gave a short address on the origin of the Morgan Heights Sanitarium. This was followed by a talk by Dr. C. N. Bottum, of Marquette who was the first attending physician to the sanitarium. He told of the opening in 1911 at which time the capacity was 16 beds. It was interesting to note that the first patient admitted, an incipient case, was later discharged as cured. However, nearly all cases were of the advanced stage. Dr. Bottum stated that at the time Morgan Heights was established, it was the first tuberculosis hospital in the Upper Peninsula and only a few in the entire state. Dr. Bottum was the attending physician for four

years, or until the first full-time physician was appointed in 1914.

Dr. Paul VanRiper, of Champion, Chairman of the Sanitarium Committee of the County Board of Supervisors, spoke briefly of the evolutionary stages through which the sanitarium passed in coming to its present high standard.

Dr. F. R. Schemm of Big Bay presented a case of "Fracture of the Anatomical Neck of Humerus, With Good Functional Result."

Dr. S. Lojocano, Superintendent of the Sanitarium, presented a case of "Tuberculosis of the Wrist Joint, Complicated by an Advanced Pulmonary Tuberculosis." This case was operated by Dr. A. W. Hornbogen of Marquette who performed Ollier's Sub-periosteal resection of the lower part of radius and ulna, all the carpal bones and a portion of the four metacarpals. This case is convalescing with no exacerbation of the pulmonary lesion. Heliotherapy is being given.

Dr. S. Lojocano also presented many X-ray pictures with history of cases of tuberculosis in all stages and cases where artificial pneumothorax was instituted.

Dr. A. W. Hornbogen presented the history and X-ray in a case of fracture of the corocoid process of the scapula by muscular exertion.

Dr. S. Lojocano read a letter from the Michigan Tuberculosis Association relative to a prospective chest clinic to be held at the Sanitarium for doctors in March. The Society accepted the invitation to hold its March meeting at the Sanitarium at the same time as the clinic.

Dr. Picotte of Ishpeming extended an invitation to the Society to hold its April meeting in Ishpeming, which was accepted.

The Secretary was instructed to send a letter of appreciation to Dr. and Mrs. Lojocano and the staff of Morgan Heights Sanitarium for the splendid dinner and entertainment.

Russell L. Finch, Secretary.

KALAMAZOO COUNTY

The regular meeting of the Kalamazoo Academy of Medicine was held in the Academy rooms January 17th. The usual dinner preceded the evening program.

The business session was called to order at 7:30 by the President, Dr. W. E. Shackelton.

The minutes of the previous meeting as printed in the bulletin were approved.

No report from special committees.

A letter from Dr. Z. L. Baldwin of the Baldwin Sanitarium requesting the Academy to appoint a committee to investigate his institution and in case of a favorable report, the indorsement of the Academy be used with physicians who may be solicited to send their patients for treatment. Moved by Dr. Boys, seconded by Dr. Bennett that this be referred to the Board of Directors with the power to act. Passed.

Dr. Russell Coller whose application was read last month was unanimously voted a member of the Academy.

Dr. Clara Unrath's application for membership was read.

Our councilor, Dr. C. E. Boys, reports that the State meeting will be held in September instead of June, the exact date will appear later in the State Journal.

Dr. Shepard spoke of the plan of the State Tuberculosis Society to hold group clinics and demonstrations here sometime in the near future. The date and places these will be held has not been decided but the official announcement will be made later.

Dr. Hugo Aach spoke of the quackery practiced by our well known "squaw" and cited a case that recently came to his attention. Sentiments were also expressed by Doctors Thompson, Gerstner and Bartholomew. Motion made by Dr. Stewart which was seconded and passed that this be referred to the Medico-Legal committee for obtaining of facts to be forwarded to Dr. Warnshuis for action.

Dr. Bartholomew spoke of the irregular practices of an osteopath in Allegan County. Dr. Shackleton asked him to gather the data and present it to the Medico-legal committee for consideration.

Dr. George Wilson's talk on the treatment of fractures illustrated with moving pictures and radiograms was indeed very instructive. It is needless to say that we all gained many sound ideas regarding the handling of such cases. The talk was discussed by Doctors Boys, Crum, McNair, VanNess, Seybold, Jackson, Andrews and Kudner.

Dr. Griswold outlined the plans of the State Health Department to establish the County Health Unit to carry on the work of the State Health Department. Dr. Kiefer proposes a health organization to include every member of the County Society and the public health work is to be carried on by the members. The unit would be headed by a full time county health officer whose functions would be, administrative, technical and educational.

The unit may or may not include the larger cities that already have full time health officers, this to be decided by the local society. Dr. Griswold states that in the beginning \$10,000.00 is about what is needed to carry on the work, the State Department would furnish one-fourth the amount, another one-fourth from the N. S. Public Health Service or other organizations and the remaining half by the county. This was referred by the president to the Public Health Committee for consideration and presentation later.

DUES FOR 1928

The dues for this year are now payable and must be paid before April 1st to avoid automatic suspension from the Academy. The dues for those living in the city of Kalamazoo is \$17.00, for all other regular members \$15.00 and \$3.00 for associate members.

LADIES NOTICE!

The Woman's Auxiliary will have a pot-luck dinner Tuesday evening, February 21st, 1928 at Mrs. W. E. Shackleton's, 127 W. Lovell St., Kalamazoo. Bring your own table service and one article.

Mrs. R. J. Hubbell, Secretary.

Regular meeting of the Kalamazoo Academy of Medicine was held in the Academy rooms, February 21, 1928. Dinner was served preceding the evening program.

The meeting was called to order at 7:30 by the President, Dr. W. E. Shackleton.

The minutes of the previous meeting appearing in the bulletin were approved.

Dr. S. R. Light read a letter, formulated by a special committee regarding the visual surveys in industry and schools by optometrists. He proposed that this letter be sent to the industrial concerns of Kalamazoo and the immediate vicinity. Following is a copy of the proposed letter:

To Employers in Kalamazoo, Allegan and Van Buren Counties:

The Kalamazoo Academy of Medicine, an organization of the physicians of Kalamazoo, Allegan and Van Buren Counties, is informed that there has been presented to many employers of Kalamazoo, as well as to the School Board, propaganda in one form or another, advocating examination of the eyes of employees and school children by men who are not medically educated.

It is generally proposed that this examination will be made without charge and the examiner will be compensated by the opportunity to sell lenses to those examined.

We consider it important to remind you that the eye is a part of the body and subject to physiological and disease conditions that affect other parts of the body. The examination and treatment of any abnormal condition in the eye should be undertaken only by those who have full knowledge of the structure and functions of the eye, as well as the relation of the eye trouble to disease in other parts of the body.

In view of the propaganda which has been spread in this matter as well as other efforts to institute a variety of health measures, we think it proper that we remind you that in all matters of this kind your medical adviser is by his education and training, qualified to inform you of the best steps to be taken; and we would suggest that when such matters are presented to you in the future, you discuss them with your medical adviser before undertaking a program which might not accomplish the end you desire.

Your comments in reply to this letter will be appreciated, and may be addressed to the Secretary of The Kalamazoo Academy of Medicine or to any one of the committee whose names are appended.

Respectfully submitted,

The Kalamazoo Academy of Medicine

by:

J. B. Jackson,
F. T. Andrews,
S. R. Light,
Committee.

Moved by Dr. Crum that this report be accepted and a copy be sent to the industrial concerns as listed by Dr. Light. Seconded by Dr. Thompson. Dr. Van Ness amended the motion to include also the industrial concerns of the counties included in the Academy. Amended by Dr. Bennett that an R. S. V. P. be incorporated in the letter. Seconded. Motion passed with both amendments.

Dr. Andrews moved that the Academy go on record as not in favor of the full time county health officer at the present time. Seconded by Dr. Crum, Motion carried.

Dr. Crum moved that the president appoint a committee of five from the Academy to consult with the City Health Officer, the City Physician and the heads of City Clinics regarding the policies of the City Health Department. Seconded. Motion passed. The following members were appointed on this committee: Doctors Andrews, Westcott, Shepard, Hubbell and Crum.

Dr. Clara Unrath's application for membership read at the last meeting, was presented for final action. It was moved by Dr. VanUrk, seconded by Dr. Stewart that the application be accepted. Unanimously passed.

Dr. James L. Pierce gave a very practical talk on a few of the common complications of pregnancy and child birth and recited several histories to illustrate their method of handling these cases.

SAINT CLAIR COUNTY

A regular meeting of Saint Clair Medical Society was held at the Harrington Hotel, Port Huron, Michigan, Thursday, March 1, 1928. Supper was served to eight members and three guests at 6 o'clock and the meeting called to order at 7:30 p. m. by the President with the following members present: Doctors Smith, Caster, Cooper, Burley, Vroman, Callery, Meredith, H. O. Brush, Wellman, Kesl, Clancy, Morris, Windham and McColl. Dr. L. R. Gaddis was present as a guest and there were also present as guests of the Society ten graduate and eleven student nurses.

The minutes of the preceding meeting were read and approved. Applications for membership in the Society were received from Dr. E. W. Caster of Yale, Michigan and Dr. J. C. Webster of Marquette, Mich. The application of the former was acted upon favorably and he was elected to active membership by transfer from the Wayne County Medical Society. The application of the latter was deferred for additional data.

President Smith made a brief report to the Society relative to a certain matter he had taken up with the editors of the local daily newspaper.

Dr. M. E. Vroman then read a splendid paper upon defective vision, including myopia, hyperopia, astigmatism, presbyopia, etc., and explained the mathematical computation necessary in correction of refractive error and also touched upon the physiology, anatomy and pathology of refractive errors. The subject was discussed by Doctors H. O. Brush, Morris, Cooper, Caster, Smith and McColl after which Dr. Vroman closed the discussion in the usual manner.

Dr. W. H. Morris then read a paper upon Diathermy, explaining the mechanics thereof and the clinical uses in treatment of a wide variety of disease. Dr. Morris is inclined toward the viewpoint that Diathermy is a valuable adjunct in the treatment of disease both medical and surgical. In concluding his paper the speaker quoted several reprints from various authorities throughout the United States showing the value of diathermy. The subject was discussed by Doctors Cooper, Caster, Windham, Vroman and Smith, following which Dr. Morris closed in the usual manner.

The Society then went into executive session during which a matter of vital interest to the community and the Port Huron Hospital was discussed, the opening remarks being made by Dr. C. C. Clancy, President of the Port Huron Hospital Association.

The meeting adjourned at 9:30 p. m.

George M. Kesl, Secretary.

A regular meeting of St. Clair County Medical Society was held at the Harrington Hotel, Thursday, March 15, 1928. Supper was served to ten members at 6 p. m. The President, Dr. Reginald Smith, called the meeting to order at 7:05 p. m.

with the following members present: Doctors Smith, Thomas, Morris, Grice, Patterson, Vroman, Waters, Kesl, McColl, Haight, Bovee, Lane, Caster, B. E. Brush, Clancy, Wellman, Bowden, McKenzie, Heavenrich, Callery, O'Sullivan, Attridge and L. R. Gaddis, local health officer, a visitor. The minutes of the preceding meeting were read and approved. The letter of Secretary Warnshuis to all County Secretaries read and discussed. The Secretary requested the members to assist him in answering the questions contained therein. The consensus of opinion indicates the members think the care of tuberculosis patients and management of free clinics the two most pressing questions in Saint Clair County. It was believed the proposed basic science law and the prosecution of chiropractors should be taken up by the State Society and pressed. It appears that no prosecution of chiropractors has even been attempted in this county.

Dr. J. C. Webster of Marquette was then elected to membership in the Society. A letter from Dr. Ralph G. Hubbard relative to a temporary location with a member of the profession requiring either a substitute or an assistant was read and placed on file. A letter from Dr. C. B. Stockwell, an honorary member of the Society, thanking the Society for sending him a plant on his birthday, read and placed on file. A letter from Lifsey Tours, Inc., relative to a tour being arranged in Europe for the coming summer, read and filed.

Dr. J. A. Attridge read a report from the Clinic Committee as follows:

"Your Clinic Committee, after a careful survey of the clinic problem, determined that a clinic centered around the hospital and conducted as set forth in our preliminary report, which was endorsed by this Society, would be a great benefit to our hospital and the people of the community in general and in keeping with the spirit of the times.

"The Committee, therefore, presented their report to the Chairman of the Hospital Board asking for space in which to conduct said clinic. The Board met on the ninth of March, when Dr. George Waters, a member of this Committee and also a member of the Board, presented our views. The Board could not furnish space at the present time and this led to the suggestion that the Board get a campaign inaugurated to carry on a drive to raise funds to get hospital, clinical or out-patient department as needed.

"This Committee believes and therefore wishes to urge this is a favorable time to push this issue. This report is based on sentiment gathered while making the previous survey.

"J. A. Attridge,
C. F. Thomas,
George Waters,
J. H. Burley,
A. J. McKenzie,
Committee."

This report was placed on file and the Society went into executive session to discuss same.

Dr. A. J. McKenzie addressed the Society upon the subject of the "Acute Surgical Abdomen." In beginning Dr. McKenzie said the subject was very broad and could not be covered in detail in a short time, but that he would touch upon predominating features. Generally the speaker confined himself to confusing points in diagnosis between the various surgical conditions often found in the abdomen and stressed the features of

the following conditions: appendicitis, pyelitis, cholecystitis, pathology of the right kidney, pyelitis associated with pregnancy, obstruction of bowels, intussusception, volvulus, embolism and thrombosis of mesenteric vessels, metastatic carcinoma of liver, ectopic pregnancy, pancreatitis, ruptured duodenal ulcer, pneumonia in children which often simulates appendicitis, traumatic injuries to contents of abdomen and salpingitis. Dr. McKenzie also touched upon the necessity for a bimanual examination in women to rule out possible disease of pelvic organs and a careful urinalysis in children to rule out a pyelitis. In relieving obstruction caused by bands, the speaker cautioned his associates to remove the entire band rather than just to resect it, inasmuch as these bands frequently grew together to re-establish the obstruction. Concerning abdominal distension associated with obstruction Dr. McKenzie stated that the lower the point of obstruction the greater the distension and the nearer the pylorus the less the distension. The upper loop must always be drained. Speedy treatment is indicated in intussusception and an important point is bloody stool below point of disease. "Sixty-five per cent of the cases of intussusception," said Dr. McKenzie, "occur at the ileo-caecal valve or junction and in reducing the condition always remember to do something to prevent a recurrence, such as stitching the caecum to the right iliac fossa." Similarly, said the speaker, in volvulus which usually occurs in the sigmoid region always anchor the bowel to the left iliac fossa to prevent a recurrence. In treating embolism or thrombosis of the mesenteric vessels always remove a little more tissue than appears to be affected in order to prevent additional gangrene after the abdomen is closed. In a mass felt in liver always search for a possible primary carcinoma in bowel. In the differential diagnosis between ruptured duodenal ulcer and acute pancreatitis, the essayist stressed the condition of the pulse early in the condition. In ulcer it was often slow while in acute pancreatic disease it showed very evident shock. In touching upon the etiology of pancreatitis, Dr. McKenzie thought that the possibility of an infection from the bile duct should be considered. Also in the treatment of pancreatitis the gall bladder should be drained. In conclusion, the essayist inquired of his associates their view of the question whether appendicitis cases, going along well at the third or fourth day, should be operated or whether it was better to treat expectantly and await an interval before surgical treatment. "I believe," said Dr. McKenzie, "that we should be conservative in such cases, providing the patient is holding his own."

The subject was discussed by Dr. Attridge at some length during which he related several interesting and puzzling personal experiences in the diagnosis and treatment of acute surgical conditions in the abdomen. Dr. B. E. Brush said the subject was very large and stressed the point that if we could make a diagnosis in some of the severe abdominal conditions and knew just where to look for pathology the patients would have greater chances for recovery. He agreed with the essayist with regard to cases of appendicitis doing well at the third or fourth day and said if the condition became worse at this time that drainage should always be done under local anaesthesia which gave the patient a much better chance for recovery.

Dr. E. W. Caster arose to compliment the essayist upon his address and stated that it was well

worth coming sixty miles to hear. Dr. C. F. Thomas agreed that a wait of four or five days is justified in appendicitis provided patient does well but that if the condition be an obstruction the earlier the surgery the better the outlook. Dr. Smith arose to mention plumbism, which he stated, in his own experience, had been mistaken for other conditions in the abdomen.

In conclusion Dr. McKenzie discussed traumatic injuries to abdominal viscera and stated that fine judgment was often required in deciding upon operative treatment or the contrary. He again stressed the withholding of blood and liquid as well as cathartics in acute abdominal pathology and the giving of plenty of liquid by hypodermoclysis or by rectum.

So ended another of the fine meetings recently enjoyed by this society. These scientific programs led by members of Saint Clair County Society have all been profitable to the members in attendance, formality has been laid aside and the various subjects discussed freely and fully for the betterment of all.

The meeting adjourned at 10:10 p. m.

George M. Kesl, Secretary-Treasurer.

MEDICAL AND SURGICAL CLINIC

DETROIT—MAY 14-18

THE JOURNAL

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IT FOR THE

EXPRESSION OF

YOUR VIEWS

ON

MEDICAL SUBJECTS

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

THE MECHANICS OF THE DIGESTIVE TRACT; (an introduction to Gastroenterology)—Walter C. Alvarez, M. D., Associate Professor of Medicine, University of Minnesota (The Mayo Foundation). One hundred illustrations; second edition. Price \$7.50. Paul B. Hoeber, Inc., New York, 1928.

Those who have read the author's first edition of this work which appeared in 1922 with 192 pages and 22 illustrations will be eager to obtain this revision which with its 447 pages is in reality a new book. The author combines the rare qualities of research worker and practising physician which fact alone should commend the book to those whose chief concern is the practical aspects of medicine and surgery. We would like to add too that the book is written in a fascinating literary style. Once begun one hates to put it down until finished. The personal element is emphasized in the large number of illustrations of workers both living and dead who have done so much to develop the physiology of the alimentary tract.

We can mention only a few of the subjects treated. Chapter four describes in an interesting way the anatomic and physiologic characteristics of smooth muscle of the gastrointestinal tract. In chapters seven, eight and nine the author amplifies the theory of gradients which occupied a goodly portion of his first book on the subject. Chapter thirteen on the movements of the stomach, and chapter seventeen the pylorus and the duodenal cap discuss phases of gastrointestinal physiology in a manner most illuminating. The chapter on Flatulence is the most exhaustive we have read on the subject. This is a basic book on the mechanical factors of digestion, the best since Cannon's notable work shortly after the X-rays and the opaque meal had been suggested for study of the hollow viscera. Mention must also be made of the bibliography of 900 items, a valuable feature to those who desire to investigate the subject further. And the publisher has co-operated to produce a volume that is a credit to the craft.

THE PRINCIPLES OF SANITATION, (a practical handbook for Public Health Workers)—C. H. Kibbey. Thirty-four illustrations, five colored plates. F. A. Davis Company, Philadelphia. Price \$3.50.

This book is written in non-technical language and is so clear that the layman of not much more than average intelligence would have no difficulty with it. It is intended for sanitary inspectors and other public health workers. It is particularly interesting where it deals with the sanitary problems of the small town and the rural municipality.

THE NORMAL DIET, (a simple statement of the fundamental principles of diet for the mutual use of physicians and patients)—W. D. Sansum, M. S., M. D., F. A. C. P. Second edition, 1927. The C. V. Mosby Company, St. Louis. Price \$1.50.

In addition to a large number of normal diet menus the author discusses the principles of diet under such headings as bulk requirements of the body; acid-ash type of acidosis; acetone type of acidosis; caloric, protein, mineral vitamin and water requirements of the body.

THE YOUNG MAN AND MEDICINE—Lewellys F. Barker, M. D., L. L. D., Professor Emeritus of Medicine, Johns Hopkins University. MacMillan Company, New York.

This book is a number in a vocational series, the purpose of which is to guide young men in the choice of a life calling. No more competent person could have been selected than Dr. Barker to write a work from the viewpoint of medicine. He has divided the book into three sections as follows: First, Decision Regarding a Life Career; Second, Service Renderable by the Medical Profession to our Social Organization; and thirdly, Personal rewards and Satisfaction of Medical Workers. Frequently as physicians we are approached in the matter of choice of profession and often when medicine is broached our advice may be summed up in the laconic word "Don't." Dr. Barker's little book will prove much more satisfactory to the young enquiring mind.

TROUBLES WE DON'T TALK ABOUT—J. F. Montague, M. D., F. A. C. S. of the University and Bellevue Medical College. Illustrated. J. B. Lippincott Company, Philadelphia.

This volume is written to educate the general public in the diseases of the rectum and colon—diseases which, through a mistaken modesty, are often concealed from the physician. Among the ailments described are hemorrhoids, abscesses, fistulas, itching afflictions, loss of bowel control, falling of the rectum, rectal deformities, diarrhoea, colitis, proctitis and ulcers; the causes of these are given as well as measures to be taken for their prevention. One chapter on cancer serves as a warning against the neglect of rectal troubles and another shows the effect of intestinal disease in raising of blood pressure. Several chapters are devoted to constipation, its causes and effects and to the virtues and defects of the various remedies commonly taken for it. The author also discusses bacteria in the colon, Bulgarian and acidophilus milk and other bacillus preparations, diet and personal care, unnecessary operations, mistaken ideas regarding rectal diseases and the evil effects of many home remedies. Evidently written by a proctologist. Other "troubles" might have been dealt with to advantage.

ASTHMA, ITS DIAGNOSIS AND TREATMENT—William S. Thomas, M. D., Associate Attending Physician in Immunology St. Luke's Hospital. Twenty-three illustrations in black and white and six in color. Price \$7.50. Paul B. Hoeber, Inc., New York.

Scientific papers dealing with the subject Asthma have been numerous but so far we know of no other book by an American writer devoted to the subject. Dr. Thomas' work has the merits of a well prepared monograph. Every phase of the subject is dealt with in a clear, concise and personal way. There is a bibliography of 325 references.

INTERNATIONAL CLINICS, (a quarterly of illustrated clinical lectures and especially prepared original articles)—Henry W. Cattell, A. M., M. D. Volume IV, thirty-seventh series; 1927. J. B. Lippincott Company, Philadelphia and London.

This well illustrated volume is especially interesting because of the articles in Scandinavian

Medicine. The orthopedic clinic in Stockholm by Prof. Patrick Hoglund, the Seranfiner Hospital and Caroline Institute, Stockholm by A. Troell, work at the "Radiumhemmet" in Stockholm. To those who enjoy medical history Dr. John Comrie's article on "History of Edinburgh Medical School" and "The Middle Ages" by J. R. Oliver will be enjoyed. There are many up-to-date articles on Medicine and Surgery.

TREATMENT OF DISEASE IN INFANTS AND CHILDREN
—Hans Kleinschmidt, M. D., Professor of Pediatrics, University of Hamburg. Authorized translation of the fifth German edition with additions by Harry M. Greenwald, M. D., attending pediatrician to the United Israel Zion Hospital; consulting physician to the Hebrew Infant Home of Brooklyn, N. Y. P. Blackiston's Son & Company, 1012 Walnut St., Philadelphia, Pa. Price \$5.00.

The author has collected only such therapeutic measures of Pediatrics as have been found of value. He has recognized the importance of diatetic and physical methods and has relegated to second place drug agents in treatment. This book has gone through five editions in Germany since 1918. Chapters on nutritional disturbance will be found of particular value for reasons that are perfectly obvious to either the pediatrician or general practitioner who has endeavored to solve these problems in his own practice.

ALUMINUM COMPOUNDS IN FOOD, (including a digest of the report of the Referee Board of Scientific Experts on the Influence of Aluminum Compounds on the Nutrition and Health of Man)—Ernest Ellsworth Smith, Ph. D., M. D. Price \$7.50. Paul B. Hoeber, New York, 1928.

THE SURGICAL CLINICS OF NORTH AMERICA, (Issued serially, one number every other month). Volume 8, Number 1. (Lahey Clinic Number—February, 1928). 210 pages with 74 illustrations. Per clinic year (February, 1928 to December, 1928). Paper, \$12.00; cloth, \$15.00 net. W. B. Saunders Company, Philadelphia and London.

THE MEDICAL CLINICS OF NORTH AMERICA, (Issued serially, one number every other month). Volume 11, Number 3, (Tulane Univ. Number, November, 1927). Octavo of 210 pages with 46 illustrations. Per clinic year, July, 1927 to May, 1928. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London, 1927.

THE MEDICAL CLINICS OF NORTH AMERICA, (Issued serially, one number every other month). Volume 11, Number 4, (Brooklyn Number, January, 1928). Octavo of 277 pages with 53 illustrations. Per Clinic year, July, 1927 to May, 1928. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

FORECASTS ARTIFICIAL RADIIUM RAYS

Artificial rays of radium, in quantities that could only be obtained from a ton of this valuable element, worth 56 billion dollars at present prices, will soon be produced in the laboratory, declared Dr. William D. Coolidge, General Electric physicist and inventor of the X-ray tube (Coolidge hot cathode tube) now in general use, in a recent address. He revealed for the first time details of a new form of his cathode ray tube, and which, by a method of cascading, he has already operated at 900,000 volts, three times as many as previously achieved.

Radium gives off three kinds of rays: alpha rays, or rapidly moving atoms of helium; beta rays, or speeding electrons—the "atoms" of electricity; and gamma rays, similar to x-rays. It has not been possible to successfully imitate

radium radiation exactly because sufficient electrical power could not be put into the generating apparatus. Dr. Coolidge's latest invention will make it possible to increase the voltages applicable to X-ray tubes generating gamma rays, and it will also enhance the power of the cathode ray tubes and speed up the electrons which correspond to beta rays. In fact, it may be possible in time to surpass the power of radium and provide a new tool for the scientist who now uses radium medically and industrially with telling effect.

Speaking before the American Institute of Electrical Engineers, which conferred upon him the Edison medal, Dr. Coolidge indicated what the apparatus can do: "This opens a vista of alluring scientific possibilities. It has tantalized us for years to think that we couldn't produce in the laboratory just as high speed electrons as the highest velocity beta rays of radium and just as penetrating radiations as the shortest wave-length gamma rays from radium. According to Sir Ernest Rutherford, we need only a little more than twice the voltage which we have already employed, to produce X-rays as penetrating as the most penetrating gamma rays from radium and three million volts to produce as high speed beta-ray."

The intensity factor would be tremendously in our favor, as with twelve milliamperes of current we would have as many high speed electrons coming from the tube as from a ton of radium. Another factor in our favor would be the control which we would have of the output. This would be quite different from our position with respect to radium, in which case no physical or chemical agency at our command in any way affects either the quality or the quantity of the output.

Dr. Coolidge's original cathode ray is from an evacuated bulb, with two long extensions. Through one end comes the cathode, which consisted of a small electric lamp filament of tungsten. Such a filament, when lighted, gives off electrons, moving very slowly. Through the other projection from the bulb extends a long copper tube, the anode. When the filament is lighted, a copious stream of electrons is emitted. Then a high voltage, say 250,000, is applied to the tube. This powerful current speeds up the electrons so that they travel through the copper tube, and out to the open air through a thin nickel "window." A "cold cathode effect" prevents the use of more than about 250,000 volts in one tube.

The method now used by Dr. Coolidge to speed up the electrons still more is the very ingenious one of placing several tubes in tandem. The electrons, or cathode rays, in the first tube are furnished by the glowing filament. The end of the first tube takes the place of the cathode of the next, and the electrons from the first tube, already rapidly moving, are still further speeded up by the application of 250,000 volts in the second tube. The speeding stream is fed into a third tube, from which the rays emerge with a speed equivalent to that of the total voltage of the three tubes. With three tubes, Dr. Coolidge has obtained the effect of 900,000 volts, and much more can be used without serious difficulty.

When cathode rays strike a solid metal "target" X-rays are given off. Thus a similar arrangement could be used to produce the most powerful source of X-rays ever devised. To accomplish this the last bulb of the series would contain such a target, from which the X-rays would be emitted.—Science Service.